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Creative Personality

The Next Step in Evolution

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THE PRESENTATION OF THE ARGUMENT

MAN continually seeks escape from his limitations. Burned deep in his consciousness is a sense of frustration due to his disappointing contacts with life, and he fain would find a larger world of freedom and power. He is always on the search for some way to enlarge his personality that he may cope more successfully with the relentless and obdurate environment. He is everlastingly experimenting to discover some new tool or formula which will give him greater control of his world or enable him to escape to or create a better world.

This search for power animates all human effort. It is the motive behind education and science, for ignorance is increasingly recognized as a serious handicap. The desire for more power is also the motivation of all business, commerce, and money-making activities. Fame and social prestige are sought for the sense of increased strength and importance which they bring.

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So great is the desire to transcend limitations that men will resort to narcotics to secure even a temporary sensation of power. Soma, opium, hashish, and alcohol give to frustrated men a brief illusion of freedom from their personal deficiencies, and make them feel like potent creative gods. Indeed, all these drugs and many others have been used in the rites of various religions to produce in the devout worshiper a consciousness of close relationship or even identification with his puissant deity.

— In music many persons of sensitive temperament find release from the sense of incompleteness. In listening to great music they appropriate the power and sweep of its majesty and feel themselves endowed with the superhuman qualities it suggests. In playing the compositions of the masters even the amateur captures partly and occasionally the creative atmosphere of accomplishment and is lifted above the disappointments and futilities of the daily grind. And the composers themselves, although the pieces they build out of their dreams and fantasies may be far below what they had hoped, feel the thrill of creative personality functioning within them as they give the world a new melody.

Art, whether it be drawing, painting, design, or sculpture, has a similar escape- and power-value. However circumscribed one's life may otherwise be, the artist can, by the magic of pencil, brush, or a bit of clay, escape into a world of his own creation where he is invested with divine energy and can give line and form to his visions.

The spirit-release from limitations which is af-

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forded by all kinds of dancing—social, folk, expressional, interpretative, ballet, and classical—is not sufficiently appreciated in some cultures as yet, but it is one of man's oldest forms of liberation from life's disharmonies. The dancer achieves a sort of cosmic consciousness by entering sympathetically into the rhythms of mother nature in her ancient tides and winds. Man's bird and animal and insect brethren are often dancing. It is quite natural that man's first religious expression, probably preceding even speech, was the ritual dance at times when the emotions were aroused by the changing of the seasons or the wonders of birth and death. There is a certain divine kinship with all evolution when man dances.

The sex-experience has traditionally been recognized as transcending mere sensory pleasure and as giving the participants a mystical moment of supreme freedom accompanied by a feeling of unity with a creative power greater than either or both. Wittingly or not, they are cooperating with the creative forces of the universe in producing a new individual.

But sex, art, music, dancing, drama, literature, education, like drugs, fame, money, and position, are all insufficient to satisfy man's desire for power and freedom.

It is to religion that man turns for relief from inadequacy and frustration. And in religion's doctrines, especially immortality, many millions have found that relief.

But today man is finding himself forced to take up the search anew, for the doctrines of immortality which satisfied his fathers are no longer tenable by

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the scientifically minded man of the present. He cannot believe in golden cities beyond the skies to which his spirit or resurrected body will be transported at death or on the Day of Judgment and where he will rejoin his loved ones, to live in an ideal society denied him on earth.

Consequently, many of the more intelligent of modern men have turned sadly from religion and have tried to content themselves with one or another of the substitutes for immortality we have mentioned.

We need a new doctrine of immortality and several have been proposed. There are those who say that a man lives after death in his children and should be satisfied to find in them his immortality. Others point out that matter is indestructible and that the chemical elements of a man's body live on forever in altered forms. Poets have rung the changes upon this thought, but few men are imaginative enough to derive any great satisfaction from the possibility that their ashes may some day fertilize the greensward. Still others talk of the immortality of influence and long to join the choir invisible of those whose memory makes future generations happier. And a fourth theory dwells upon the idea that he who helps to establish an institution which lives on through the years and renders social service is thereby himself immortal.

These theories of biological, chemical, influential, and institutional immortality all have their value and we shall speak further of them in a later chapter, but none of them fully satisfies. They seem colorless and inadequate to most of us, and hardly

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worthy of the name immortality. They lack sufficient inspiration to make life seem worth while.

Can we of this scientific age find a new approach to the ancient problem? Can we rediscover the essence of immortality, or something better?

It is the purpose of this book to point out that we seem to be on the verge of finding a new evaluation of human life and the universe and the relation between them. It may be that the evolutionary approach will give us what we are seeking. It may be that modern science, which has so devastatingly destroyed the old theories of immortality, will itself enable us to replace them with something much more precious and inspiring, as well as more credible.

The theory or doctrine which we here propose will probably seem unsatisfactory to many of those who find comfort in the older doctrines. It is admittedly incomplete, but what we have to suggest is at least a beginning, an introduction to a philosophy of life which others may develop and elaborate. And it has a connection close enough to make a bridge from the old to the new.

To anticipate a bit, it might be here stated that this bridge between the old religion of revelation and the new religion of science, between theism and humanism, is that kind of religious experience usually known, rather unsatisfactorily, as mysticism, or, better, as cosmic consciousness, which is achieved when the individual is both intuitively and rationally aware of the universe and his intimate relation to it. He has the knowledge and the feeling-consciousness that he is not only an important end-product of evolution, but

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also a responsible, potentially creative personality in his own right—responsible for the very reason that in him the universe itself has become aware of itself. In other words, the mystic experience, whatever form it may take, is essentially the dazzling sudden coming to self-consciousness of an evolved portion of the universe, man himself.

When both men-of-religion and men-of-science study until they understand the psychological experiences of the mystics, they will find there the key to *creative personality*, which is the great end-object of the whole evolutionary process.

Perhaps religion's mistake has been in overemphasizing "creation" as a thing past and done with which occurred once and for all "in the beginning," when a personal anthropomorphic Creator made sun, moon, stars, the earth, vegetation, animal life, and man, and then rested from His labors. It may be just as religious, and nearer the truth, to place the creative personality at the other end of the process. It is certainly more inspiring for modern man to believe that he can have a share in doing the creating than to think it was all done for him long ago.

The evolutionary approach to the problem of "immortality," or freedom from limitations, or creative personality, requires for its understanding and better appreciation a brief review here of the process of the evolution of life upon this planet.

There have been times in the emergence and development of earth-life when certain comparatively sudden and abrupt changes have occurred—when evolution seems to have taken a mighty leap forward.

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There is a term used by scientists, saltations, coming from the Latin *salto*, *saltare*, meaning to jump. Saltations are jumps ahead in evolution.

Growth may be very slow for a time, and then the pace is suddenly accelerated, and marked mutation changes occur in a fairly brief period of time. The suddenness may be more apparent than real, for the changes may be traced back for some distance into the period of slow development. But when a number of related modifications come to a climax almost simultaneously, the effect produced is that of a new form coming suddenly out of an old one.

This is apparent in the development of the individual. Birth is the first crisis. Then there is the time when the infant suddenly becomes a boy, and another period at adolescence when the boy seems to grow up overnight. Another marked change comes at the age of about thirty, when mental poise and a vision of life's possibilities and responsibilities seem suddenly to come upon many men. And in a few there is discernible another change at about fifty.

There have been several such pivotal points in the evolution of life on this earth. These saltation points or crises took place at times so far in the past that they cannot be dated, but a careful study of all the evidence enables us to recognize the fact that these crises have occurred. We mention them briefly here to return to them for fuller discussion in later chapters.

The first of these crises was the appearance of life itself, the development of life energy in some particle of protoplasmic material which differed in no

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wise in its general appearance from other particles not possessing this new quality. The line of demarcation between non-living matter and matter which has life is very difficult to draw. The fact that inert matter resembles living matter so closely that only experts can detect the difference after long examination is one of the most striking arguments for spontaneous generation. We should not say that somebody put life into matter but rather that matter became alive.

Long, long millions of years ago, then, there came a point in the process of evolution when the gradually changing combinations of chemical elements on the surface of this planet began to live and move and have being. Perhaps chemistry will develop sometime to the point of nicety and fine discrimination when chemists will be able to reproduce that historic moment when matter first became alive. All the Frankenstein and Pygmalion stories are reflections in popular mythology of man's dream that he might be able to make matter live. However it occurred, this developing of inert matter into living matter was the first great saltation or crisis or pivotal point of evolution.

The second earth crisis occurred countless millions of years later, when this life had evolved through many, many forms, from primitive, protoplasmic unicellular organisms, through molluscan, piscine, reptilian, amphibian, and mammalian forms, until a creature had developed which by contact with its environment had reached a precision of adjustment between its brain and its body which enabled it to become what we call, for want of a better word, con-

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scious. Primitive forms of consciousness are to be found in lower animals: they had brains, but very undeveloped ones, and were only very faintly and occasionally conscious.

No one knows which animal was the first to think, but we suspect there are other animals besides man which do think. To be sure, their thinking is not nearly as highly developed as that of man, but anyone familiar with dogs, horses, elephants, and apes knows that only the unthinking would deny that these animals do think.

But they do not know that they are thinking.

The third crisis in evolution was when consciousness became self-consciousness, when the thinking animal came to know that he was thinking. Self-consciousness means self-recognition, and self-recognition is that which differentiates man from the other animals. In other words, the third crisis was marked by the advent of man.

The fourth crisis is upon us. It is the thesis of this book that a saltation, a jump ahead in human evolution, is imminent. This is not to say that all men are on the verge of "suffering a sea-change into something rich and strange." There are lower levels of men on earth who are hardly even self-conscious as yet. But among the higher personality-types certain indications have for some time been discernible, intimations of the approach of a superior type of being, neither angel nor demigod, a naturally developed person, but with definite characteristics different from those of the majority of men.

Just as the first crisis was the coming of life, the

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second the coming of consciousness, the third the coming of self-consciousness, so the fourth is the arrival of what might be called cosmic consciousness.

The phrase, cosmic consciousness, is somewhat ambiguous. It may be taken to mean that the cosmos itself is conscious. That is, that whatever this cosmic energy may be which is the source of the life of the world, this vital impulse, this *élan vital*, it is itself conscious. This idea of cosmic consciousness would be, in a way, identical with the idea of God.

But another interpretation of the phrase holds it to be that state of mind into which an individual may enter during which he is conscious of the cosmos. In this state of mind, he becomes intellectually and emotionally aware of the universe as definitely and closely related to himself. He recognizes himself as an integral part of the universe, and even in spirit identifies himself with it. He partakes of its creative nature. He becomes cosmically and creatively conscious. It is this type of cosmic consciousness with which we are concerned in this book.

Let it be stated at the outset, however, that the fact that we are concerned with this second type of cosmic consciousness does not necessarily exclude the consideration of the other type, for when the individual becomes conscious of the cosmos, he may possibly discover that this cosmos is itself conscious, in himself, at least!

The four crises can all be stated in terms of consciousness, for as soon as matter evolved into life, that life, primitive as it was, might be called reaction-consciousness. When life evolved mind, the consciousness

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became more acute. Nerve-ends became more sensitive. The more the animals developed, the greater their area of consciousness, that is, the more things they were conscious of. Then, when mind developed further and man appeared, the area of consciousness was widened to include consciousness itself. Finally, the enlargement of the field of consciousness to include the whole cosmos is the fourth crisis which we have termed cosmic consciousness.

These four crises find their common element in the fact that each is marked by the coming of a new revolutionary quality or characteristic. The coming of life from matter was the development of a new quality in the primal substance called matter. The second crisis, the coming of mind, was the appearance of a new quality in that sublimated matter which we call life. The third crisis, the coming of self-recognition, was the development of a still more sublimated element in mind, and the fourth crisis is the coming of a higher quality in personality, namely, cosmic creative consciousness.

So revolutionary were the changes consequent upon each of the first three crises that it may be said that a new world or state of existence came into being at each time. Likewise the fourth will so change existence for mankind that it is difficult for us now to conceive of the new era-to-be.

It is difficult, but not impossible, for we have already had upon this earth some forerunners of the coming race.

There have been certain individuals who have seemed to be peculiarly gifted beyond their fellows in

their appreciation of their own personal relations with the universe. This universe or cosmos has usually been personified by them into a deity of some sort. They have had strange religious experiences, frequently of a trance nature, experiences of the sort usually called mystic. In a sense, these individuals have been more or less cosmically conscious.

The outstanding characteristic of nearly all these mystics who have gone into trances or states of mind in which they felt particularly close to a deity is the fact that almost invariably they report afterward that their cosmic experience was preceded or introduced by the appearance of a great light. Any student of comparative religion can point out the remarkable similarity of these so-called theophanies—Moses at the burning bush, Zoroaster at the River Daiti, Buddha at dawn under the bo-tree, Jesus emerging from the waters of the Jordan, Paul on the Damascus Road, and many others.

All report the appearance of a bright light. Their interpretation of the light varies with their racial background and geographical location. Sometimes it is the illumination of a natural object, such as a bush or a tree. Sometimes it is the coming of the dawn after a night of vigil. Then again the light seems to come from the sky itself. Several of these prophets use the phrase, "the heavens opened."

Sometime in the future when we know more about psychology than we do now and have made more careful studies of the influence of environment upon the nervous system, we shall know better what happened in these reported theophanies.

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There is in plants a certain type of behavior called heliotropism, a turning of the plant toward the light. There are many plants which turn the face of their discs toward the rising sun and follow it through the entire course of the day until it sets, so that the blossom faces east in the morning and west at night. It is, of course, well known that plants cannot grow properly without plenty of sunlight, and that animals naturally seek the sunny places.

It may be that we shall one day discover that theophanies are mental photisms which in man are parallel to heliotropisms and phototaxis in plants and animals.

Akhenaten, in the fourteenth century B.C., recognized the value of this powerful force which was in the sun, and which seemed to him to control life upon the earth. He observed the effects of sunshine upon man and beast and became so enamored of the idea of the influence of the sun that his religion was called Atenism, from Aten, the sun's disc.

On the conventional Egyptian portraits of royalty, it was a custom to picture in one corner of the drawing a section of the sun's disc from which rays of light streamed toward the royal subject. These rays terminated in hands holding the ancient symbol of life, the ankh. This life flowing from the sun to the human subject was the recognition of the creative power of light in human life.

A sudden blaze of effulgence is connected poetically with illumination of soul. When we have a sudden access of mental clearness, we speak of being illuminated or having a bright idea. It may be that in

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these common experiences we have a distributed form of theophany which when concentrated in particular individuals produces exceptional mental clarity.

The scientific study of theophanies is likely in the future to result in very important discoveries in the psychology and history of religion. The important thing for us to consider at this juncture is what happened at the theophanies or immediately thereafter.

When this sudden brilliance came upon the individual, there usually followed a period which is afterward described by the one who experienced it as contact with deity. He says, "I have seen God," or, "God appeared to me. I saw His brightness and I heard Him speak." Parallel with these theophanies are other mystic experiences likewise interpreted as contact with deity.

We are learning that these mystic experiences are not simply the imaginations of an overwrought and sensitive soul, but are of great significance for the understanding of this peculiar thing called religion.

We are not obliged to accept the interpretation which the subject places upon his experience. He reports long conversations with his god, and sometimes the communications which he claims to have received are almost unintelligible. His interpretation of his mystic experience is greatly influenced by the theological background of his time and by his previous life contacts.

The important thing for students of religion is this: that the more intelligent individuals who have these experiences emphasize the feeling of peace and of at-oneness with the universe which follows upon

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the theophany. It is really remarkable how personalities which were disorganized or at least apathetic before these experiences seem somehow to have their scattered elements fused into one blazing purpose. A transformation actually does take place, so that the individual is hardly recognizable by his former neighbors. "Is not this the carpenter's son? How then can he do these mighty works?" The word, works, is significant. They recognize with wonder the emergence of his creative power.

This feeling of being at peace with the world and at one with the universe, although it is usually somewhat confused with the idea of contact with a personal god, is extremely important for our study. We shall not be misled into assuming that the arrival of cosmic consciousness in the individual is contingent upon a theophany. Evidently in times past, only unusual personalities in isolated instances arrived at this peculiar peace of mind, and they admitted that it passed their understanding. It seemed magical to them, and miraculous events were reported as occurring at the time. Nothing was too incredible to happen when their whole life seemed suddenly transfigured.

Theophany is an unusual event, and frequently, when the prophet endeavors to reproduce in his disciples the same effect, he is sadly disappointed. It is not to be accomplished simply by saying, "My peace I leave with you." Usually the successors of all prophets have been rather disappointing persons. Disciples have been unable to attain the heights which their masters reached, unless they too somehow managed

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to have a theophany. Cosmic consciousness cannot be bequeathed, nor can it be transmitted by the official "laying on of hands."

What we are suggesting is this: that these few scattered instances of the attaining of cosmic consciousness by the lone and difficult path of theophany or mystic trance are precursors, forerunners of what may some day be the normal experience of any individual who really desires it. And no trance will be necessary, although a quiet period in a solitary place may still be found a helpful preparation.

If it seems an incredible supposition that this may be the case, and if the whole idea appears very difficult to grasp, we must remember that in thinking about it, we are in the same position that an animal would be that tried to imagine the self-consciousness of a man, if indeed an animal were capable of trying, even.

Probably the early men at that far edge of human history when a few anthropoids passed over the line from animal to man were regarded by their fellows as crazy; only, of course, being animals, they would not have any such concept as crazy. At any rate, they were regarded as different, or queer, or dangerous.

Probably the earliest men were only occasionally human. We infer that easily from the fact that even today we are animal in our behavior three fourths of the time. We are conscious but not self-cognizant for any long period. Our reactions are almost always automatic. We can think but we seldom do. Our behavior patterns are fixed upon us early in youth and we fol-

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low them religiously and unconsciously. Just as the animals could not understand those of their number who became men, just so today most of us find it difficult to comprehend those individuals who have arrived at the next stage of evolution beyond ourselves, namely, the stage of cosmic creative consciousness.

Now it is quite likely that there are many who would say at this point, "It is not desirable that the men of tomorrow should resemble the prophets of yesterday." They would point out that the religious mystic of former ages was frequently a very poor citizen and hard to get along with. Usually he left his wife if his wife had not already left him. And frequently these men were so unsociable that their fellows killed them.

But he who assumes that because the prophets of the past were undesirable companions, therefore cosmically conscious men will be undesirable in the future, must remember that in the past these mystics were so very rare as to seem crazy to their contemporaries. Like Jesus, they simply did not fit into even the first social unit, the family. Once a considerable group of cosmically conscious folk is formed, however, the strangeness will disappear.

It may be objected by the cynical that there is no apparent likelihood of any considerable number of those who are cosmically conscious appearing upon this mundane sphere, because religion seems to be receding rather than advancing. The answer is that whereas in the past this cosmic consciousness came by way of religious mysticism, we have now come to the point of development in the history of the human race

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where religion has an ally, or perhaps a successor. Science seems to be discovering the existence and importance of certain forces, some of them perhaps extrasensory, which by intuition religion has dimly apprehended and has often naively deified.

When the worship of what we have ignorantly called the supernatural is supplanted by the scientific examination, analysis, and utilization in creative works of the vast now unknown forces, a process of advolution which is already beginning, then the spiritual power which the few religious mystics occasionally knew may be available by a perfectly natural process to anyone who takes the trouble to attain it.

CHAPTER ONE

THE FIRST CRISIS OF EVOLUTION

THE COMING OF LIFE FROM MATTER

THE QUESTION of human destiny which concerns us in this book is definitely related to another which has run it a close second in interest, the question of human origin. Where we are going may depend somewhat on where we came from. What we may become is probably conditioned by what we have been.

Religions of varying sorts have agreed surprisingly upon one simple answer to the two questions of our origin and destiny—we came from God and we return to God.

But when we press the prophets for details, their answers are contradictory to each other and very unsatisfactory to the modern man familiar with science. The word, God, especially when spelled with a capital initial, can evidently have so many different meanings, all of them bitterly defended, that a person who wishes to be clearly understood is wise to use it seldom.

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The search for the origin of life is not ended nor even very much furthered whether we listen to the orthodox Christian who tells us that God breathed the breath of life into an image He had made out of the dust of the ground, or to a modernist Christian who defines God as the principle of integration in the universe. Neither answer begins to satisfy the insistent curiosity of the scientist, and we are all at least amateur scientists today, thanks to the educational trend of the last two generations.

The theory that man was a special creation so flattered his vanity for many centuries that the search for the origin of life was seriously delayed, but of recent years he has been making up for lost time. For a while, during the latter half of the nineteenth century, we were so shocked and thrilled by the Darwinian suggestion that we were cousins of the apes that we failed to realize that our search for life's beginnings was not ended but rather lengthened.

But when we pushed back beyond the simians and their immediate mammalian ancestors, through precedent forms to the amoeba, and further, the minuteness and simple structure of the earliest forms of life, from which all other forms had evidently come, awakened us to the possibility of the spontaneous generation of life from matter.

Now the spontaneous-generation theory, called abiogenesis by scientists, was rather in disrepute, for it had appeared many centuries ago in a different form and had been proved a mistake. Aristotle taught abiogenesis, solemnly asserting that plant lice spring from dew and that certain animals rise from decay-

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ing substances. Down through the centuries various treatises on natural history have given it forth as fact that maggots rise from putrid meat, insects from the leaves of plants, frogs from slime, bees from the flesh of bulls, and mice from old rags. A famous sixteenth-century alchemist named Van Helmont asserted that if one put some sweet basil in a hole in a brick and covered it with another brick, in a few days he would find that scorpions had been engendered.

Survivals of these ancient superstitions still persist in country folklore. A rural cousin of mine assured me once that if I would only put a hair from a horse's tail in a bottle of water it would turn into a snake in a few days.

All these examples of alleged abiogenesis are very evidently due to mistaken deductions from incomplete observation. Aristotle had seen dew on plants one morning and dew and aphids on the same plants the next morning, and being unfamiliar with the life cycle of aphids had drawn his hasty conclusion. The man who saw maggots in decaying meat, and there must have been many observed before the days of refrigeration, simply had not been around when the big bluebottle flies had laid their eggs. Insects are frequently found on leaves, frogs in slime, and mice in old rags, but to mistake habitat for progenitor seems so utterly ridiculous to us today that we wonder at the ignorance of the "wise men" of old. The scientific principle of control of conditions during an experiment is such a commonplace to us that we forget that such an obvious precaution did not occur to the minds of men of the prescientific age. When

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writers of the Bible considered bats to be birds, mentioned four-footed insects, and thought that hares chewed the cud, they exhibited a similar lack of observation.

It took an Italian poet of the seventeenth century to upset abiogenesis. Francesco Redi is famous for his delightful poem, *Bacchus in Tuscany*, but he was interested in other matters than the varieties of Italian wines. One day he tied some gauze screening over the top of a wide-mouthed bottle into which he had put decaying meat. The usual maggots failed to appear in the meat, but they did emerge from the eggs which hopeful flies laid on the gauze.

From that time on, abiogenesis gradually fell into disrepute, but only gradually, for the newly discovered microscopes revealed microorganisms even in gauze-covered bottles.

A Roman Catholic priest named Needham, whose experiments were reviewed and corroborated by the great French naturalist Buffon, demonstrated that animalculae appeared in mixtures which had stood several days after having been heated to destroy germs. Both these men, therefore, still clung to belief in abiogenesis.

But exactly one hundred years after Redi's 1668 experiment, another Italian, Lazzaro Spallanzani, dealt another blow at abiogenesis by showing that animalculae did not appear in flasks containing Needham's infusions if the flasks had been properly sealed.

Six years later, in 1774, a Unitarian preacher, Joseph Priestley, discovered oxygen, and thereby unwittingly gave the theory of spontaneous generation

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another lease of life, for its proponents quickly pointed out that since oxygen is necessary to life and had been excluded from Spallanzani's flasks with their flame-fused necks, it was obvious that the infusions had not been given a fair chance to generate animalculae.

It was not until 1859 that abiogenesis was finally disproved by a scientist named Schroeder who closed the necks of the flasks with cotton wool. Oxygen could then enter, but no organisms, and nothing was generated in the flasks.

However, 1859 is linked with another name, that of Charles Darwin, and the discovery of evolution was to lead eventually to the consideration of the possibility of the original spontaneous generation of the first living organisms from which all life evolved.

Before much study of that problem was possible, chemistry must needs develop far beyond its mid-nineteenth-century status; and, in the meantime, Sir William Thomson, better known later as Lord Kelvin, had advanced his meteorite theory. He believed that terrestrial life originated from organisms borne hither in crevices of meteorites formed by explosions of planets from other distant solar systems. That theory has been generally disregarded because of the difficulty of believing that any kind of life could survive the very long and very cold journey from even the nearest of solar systems to the earth, especially when that intense cold was suddenly followed by the intense heat generated by the contact of the meteoric matter with the oxygen of the earth's atmosphere. But, as lately as 1936, Charles B. Lyman of the University of California revived Lord Kelvin's theory and aroused con-

siderable interest by stating that he considered the carriage of bacteria by meteorites possible.

The viability and life-persistence of bacteria is greater than we used to think, but even if we grant that Lord Kelvin and Dr. Lyman are right, which is granting a great deal, the problem of creation and evolution is only pushed one step further back. For how did life originate on those planets from which such bacteria-bearing meteorites broke off? If we are seeking the origin of life, the Lord Kelvin theory has not solved the problem. Nothing is gained by such an evasion.

The real question is: How did life originate on *any* planet or celestial sphere?

The answer probably lies in the field of biochemistry. Anyone who has carefully studied the relation of biology to chemistry will be very willing to admit that science does not yet know exactly where chemistry leaves off and biology begins. But when you get to the score or so of known amino acids, you know you are near the border line, and you suspect that you are on holy ground, perhaps the scientific Garden of Eden, where life really did begin.

The gap is infinitesimal between the first form of life, which belongs in the field of biology, and the most complex chemical, which, of course, must be studied by the chemist. Chemistry and biology are very rapidly approaching each other in the connecting field of biochemistry, and one of these days a scientist will startle the world with the announcement of the discovery of the secret formula for making matter come alive.

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It will probably prove to be no more expensive nor difficult than was the splitting of the atom.

That scientist will simply have reproduced under controlled conditions the original abiogenesis or spontaneous generation of life from matter.

Because of the association of that word, abiogenesis, with such superstitious and unsavory ideas as maggots generated from decaying meat, there is a growing tendency among scientists who, almost unanimously, believe that life must have originated on this planet by some sort of spontaneous generation from non-living matter to refer to their theory by such names as archeogenesis or archebiosis. Even the phrase, spontaneous generation, is avoided as far as possible because of its former association with alchemy.

Science shows a commendable diligence in inventing new words to employ in place of an old word used in a new sense. Modern theologians would do well to follow that example. No scientist would continue, for instance, to use the word atonement when he no longer really meant vicarious blood sacrifice, not even if he pronounced it at-one-ment after the fashion of religious casuists.

A. B. Macallum suggests the use of the phrase, "the paleogenetic theory," as preferable to either abiogenesis or spontaneous generation in referring to the original generation of living forms from non-living matter at the beginning of the long process of the evolution of organisms.

Whether we use archeogenesis, archebiosis, or the paleogenetic theory, it is obvious that the term refers to a period so remote that only conjectural statements

can be made as to what actually occurred. But the advance of physics and chemistry has made available a surprising amount of information as to the conditions which must have prevailed when the earth was young.

Astronomy, too, has contributed much to our knowledge of conditions on planets which are now in the state of development in which the earth was millions of years ago. And with what the geologists have discovered, we are now in a position to chart the approximate course of events in the great primeval drama, the climax of which was the production of the first living organism.

We must continually remind ourselves of the exceeding simplicity of the first living thing. For the uneducated mind of an early Semite, for instance, the problem of the appearance of life on the earth was the question of how the first man appeared. The animals and the vegetables were considered rather incidental: they were created simply for "the service of man." And man was made by God, by direct fiat creation, as fully developed as were those who were pondering the problem. And, moreover, the first man, it was taken for granted, was an adult.

The contrast between an adult man and matter is so great that, even today, the possibility of life coming from matter seems to many too absurd to think about. To the early Hebrew, who believed that man came from the dust of the earth, there never occurred the idea that he came from that dust by evolving, although professional reconcilers of science and religion try to tell us that the book of Genesis and the

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theory of evolution are compatible because both hold that man came from dust!

But when we know that the adult man is made up of a multitude of cells which all developed from a single simple cell; when we can trace by the aid of our knowledge of embryology and biology the process, step by step, of the evolution of the individual from an ovum of his mother, fertilized by a spermatozoon of his father, through the many stages until he becomes a mature man; and when we know that the life of the individual reproduces the history of the evolution of the race, then we are more hospitable to the idea of the possibility of the original parent organism of all life having developed from matter.

When also we know from chemical analysis that the chemical constituents of a living protoplasmic cell are of the identical elements found in non-living matter, although in different combinations, we are then conscious of approaching a solution of the so-called mystery of life.

Today, it appears, living matter comes only from living matter, life only from life. Triumphant biogenesis confidently proclaims, *omne vivum ex vivo*. Yet there must have been a time when life came from that which was not living. Conditions may have been different millions of years ago. Indeed, they probably were different.

When the rocky crust of the earth was still very hot, before the oceans formed, that which later was the oceans existed in the form of water vapor forming a thick atmosphere. Condensation after condensation of that vapor on the hot crust occurred until the sur-

face of the earth was cool enough so that the moisture became liquid, and water in increasing quantities remained upon the surface. As water formed, the atmospheric pressure of the vapor decreased but still remained many times heavier than today. That fact alone means that conditions were vastly different in respect to the possibility of the formation of different chemical combinations.

The rapidly repeated condensations caused almost continual electric storms, and the tremendous voltages released meant the ionization of atmospheric elements and the consequent appearance of new chemical compounds.

The recent marvelous development of spectroscopic astronomy enables us to describe the chemical constituents of the stars. Delicate instruments permit us actually to take the temperature of those stars. We are thus able to tell how the chemical elements of a star vary as it cools. In the hotter stars there are hydrocarbons, for instance, and in those a thousand degrees or so cooler have been detected oxygen, nitrogen, carbon monoxide, and cyanogen.

The primordial atmosphere of this particular planet of ours, therefore, can be approximately ascertained. We know that there was more carbon dioxide and less oxygen then than now. There were present, also, enough electrical discharges to ionize the chlorides into free chlorine, which would naturally facilitate the appearance of new compounds. The free chlorine would also combine with the hydrocarbons formed by the condensing water and the carbides of the rocks.

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Innumerable chemical combinations were possible and probable, and the process went on until there were produced those amino acids which are recognized by scientists as the link between inert matter and living organisms. The scientific summary of the process is well stated by A. B. Macallum in *Human Biology and Racial Welfare*, page 44, as follows:

To summarize: the primal organism, the protocyte, was ultramicroscopic in size, was of comparatively simple constitution, and began as a product of the union in a special complex of a number of amino acids which were formed from constituents of the atmosphere when the condensations of water vapor, at or below 100 degrees Centigrade, were continuous, and when also evaporation of small isolated bodies of water concentrated the amino acids in them and rendered the synthesis of them to complexes, millions in number, one of which, of special constitution, had, to use Tyndall's expression, "the promise and potency of all terrestrial life."

The question naturally arises: If life originated in a chemical compound, why cannot chemists today produce a living organism? The answer is that chemistry is still a young science, so young that such a delicate task is yet too much for it. But it has already done so much in its laboratories that it has greatly changed the living conditions of nearly all human beings. If it continues to advance, it is certainly not beyond the realm of possibility that it will be able to reproduce the conditions which prevailed when life appeared from matter, and then to experiment with various chemical combinations known to be very similar to those contained in living protoplasm, until our wondering descendants, not many generations hence, will file in reverent procession before a test tube in which

some genius of a scientist has succeeded in producing from chemical matter a veritable living cell.

More than chemical skill will be required, however. We shall need to cultivate among men a greater faith in man's own powers; and we shall need to eliminate superstitious fear, else some fanatic will break into the laboratory as the task nears completion and destroy the work of years of patient labor as he shrieks, "Down with this blasphemous work of the devil!"

The human conditions, as well as the chemical ones, must be right, before we are able to marshal all our powers to the accomplishment of what is now by most men deemed impossible and presumptuous.

Presumptuous, for the creation of life is traditionally in all religions considered to be the work of God alone. If once science produces a living organism, and the fact is proved beyond all doubt, then religion, if it survives at all, will be radically different from what has gone under that name in the past.

When man does produce a living organism, there will be for us all a tremendous satisfaction. The chain of life will be then complete. Man will have produced that which produced him. What a sense of freedom will then be ours! The universe will not seem so obdurate. The iron chain which has bound us will be broken. The torturing dualisms of man versus nature, mind versus matter, subject versus object, and divine versus human will dissolve in the new integration. Monism will bring us its peace at last.

In matter was life and the life became man.

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But the road was long and the dangers to evolving life were many.

Consciousness must develop, and then self-consciousness, before cosmic consciousness could even be named.

CHAPTER TWO

THE SECOND CRISIS OF EVOLUTION

THE ARRIVAL OF MIND IN ANIMALS

THE FIRST CRISIS was when matter developed life; the second, when life developed mind. From the first appearance of living matter upon the earth to the advent of consciousness or mind in highly developed living matter was an exceedingly long period, marked by many very slow changes of form and function.

Properly speaking, consciousness did not appear until the higher vertebrates arrived on the scene. But just as non-living matter contains the same chemical elements as living matter, so the earliest forms of life had in them the elements of consciousness.

No sooner had the first crisis become complete than the second was on the way. Life had always in it the promise of mind. Thomson goes so far as to say, "The probability is that Life and Mind are coextensive."

Now there is such a thing as "The Psychic Life of Microorganisms," as Binet proved in his book of that

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name, but one is allowing him considerable latitude in the use of the term, psychic. Certainly one cannot permit it to mean mental when referring to micro-organisms, not in the same sense in which we speak of the mental life of apes.

When an amoeba flows its body around a particle of food and absorbs it, there is a certain directional activity similar in one respect at least to the act of a chimpanzee who piles several boxes in a pyramid in order to reach a banana suspended at the top of his cage. But the chimpanzee exhibits intelligence.

The words, mind and consciousness, must be extended beyond their common everyday meaning if they are to be applied to any form of life below the higher vertebrates, yet brains appear much earlier, and nervous systems very early indeed.

When mind is thought of as coextensive with life, then mind must be made to include all those progressive forms of adaptation of organism to environment which preceded and anticipated it.

Holmes, in *The Evolution of Animal Intelligence*, page 71, says, "The behavior of Amoeba is essentially like that of the higher animals; it avoids things that are injurious; it seeks things which are beneficial, and it adapts its behavior to new conditions. Life is very much the same sort of thing whether in an Amoeba or a man." It might be replied that this is not life, but mere existence, and that the seeking of the beneficial, the avoidance of the harmful, and the adaptation to change are the barest essentials of continuing to be, as an organism. Life is not the same sort of thing for a man as for an amoeba; it is infinitely more varied and

complex, so much more so as to be a different sort of thing altogether.

Let us be prepared to admit that intelligence is not unrelated to instinct and to other preceding and simpler forms of behavior which enable the organism to survive. Intelligence is not new if being new requires that there be no connection with what served a somewhat similar but limited mode of action before.

The automobile is not new if we look at it simply as a means of locomotion on four wheels by the use of connected power, for the horse-drawn carriage was all that. Nevertheless, the automobile is a new thing on this planet, and has vastly affected human life on it.

Similarly, and much more so, intelligence is distinctly a new thing, and of incalculable import. Instinct was itself a marvelous mechanism, and in some of its higher developments seems almost a sort of racial reasoning, but if it had been the final word in evolution, then the whole long process of evolution itself would have been a failure, ending in a blind alley of futility.

And, from our point of view, the failure would have been greatest in that there would have been no one to know that it was a failure!

The chronicle of the arrival of mind in animals, then, is the story of how a new thing came to be upon the earth, a new thing that developed out of things old and long preparing.

Little as we know about it in detail as yet, there is no more fascinating study for the mind of man than the inquiry as to how mind itself unfolded out of the

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instinctive and habitual reactions of animal organisms to their environment.

It is really a study in the growth of sensitiveness.

For the animal brain, which later became the human brain, is surprisingly discovered to be but an infolded bit of sensitive skin. Indeed, the whole nervous system, of which the brain is the most developed part, was once on the outside!

The three-pound ball of gray puttylike matter, now protected by the bony box of the skull, was, once upon a long time ago, the responsive epidermis of a primitive organism which had no inside nervous system or brain whatsoever.

In the tentacles of the sea-anemone, for instance, may be observed direct nervous response without brain action. Here is the simplest nervous system. A neuron runs from the skin surface to the muscle lying underneath. Touch the skin, and the muscle reacts.

In other parts of the sea-anemone's body, and in jellyfishes, we see the next stage in the evolution of the nervous system. Instead of one neuron, there are two, one which receives the stimulus and another which transmits the impulse to the muscle. Differentiation has begun between sensory or receptive nerves and motor or effective nerves. —

The third evolutionary stage in the nervous system arrived when communicating neurons developed between the sensory and motor neurons. Insects, crabs, and snails have the three kinds, and, with variations, they are found in all the higher animals.

Evolution thereafter proceeds by the increasing complexity of the nerve system, especially by the

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growing proportion of communicating neurons. By the time man is reached, the spinal cord is composed two thirds of its bulk of these connecting nerve cells, and the brain almost entirely of them. The hemispheres of the brain, the most important parts, consist of communicating neurons only.

The brain has frequently been compared to a central telephone exchange, where the connections are made between incoming and outgoing lines.

The long process of evolution through millions of years from the earliest forms of life with their very simple modes of reaction to environment, on up through succeeding forms with slightly better equipment, with more and more sensitive nervous systems, first on the outside and then gradually enclosed within the inner body, until the mammals are reached and the brain begins to take shape—this whole process provided the foundation and the background for the mechanism of intelligence.

And this process is a matter not only of racial history, but of individual development. We repeat it, each one of us, in our own biological evolution.

To a person unfamiliar with embryology, it is startling to discover that he once wore his entire nervous system on the outside.

The whole process by which life developed a highly organized nervous system is repeated in miniature and in a few days in the egg and embryo of a frog.

With a microscope, one may observe how in a two-day-old egg of a frog there is a thickening of the outer layer along one side. Soon the center of this

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thicker part becomes slightly depressed and the edges rise. Thus is formed a groove, which deepens, and the groove becomes a tube as the edges infold and meet. The tube sinks into the embryo and soon has no connection with the outside skin, of which it once formed a part. The tube undergoes still further changes, as the lower or rear part becomes the spinal cord, while the part at the head end swells into little protuberances which gradually develop into the brain.

The very same process takes place in the human egg and embryo, except that, of course, by the time of birth, the brain of the human baby has taken on a shape far more developed.

The arrival of mind in animals, then, was the result of an increasingly effective adaptation of the individual to its environment. The first contacts were through the skin, with simple, direct, unmediated connection with the muscles. Later, the mechanism of sensation transference was retired within the body, and the nervous system became highly specialized.

With the advent of the first primitive brains, the development of instinct became possible, and, much later, intelligence. But the evolution of the brain itself to the point where intelligence might arise is a long story and can be but briefly summarized here.

The brain evolved as the special senses appeared.

At first, the primitive vertebrate from which we have all descended received all stimulation through the skin. Like the common angletworm, it could respond to odor, light, and sound, yet had no nose, eyes, or ears.


To us, with our well-developed smelling, seeing,

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and hearing organs, it seems so strange as to be almost past belief that any creature could, to a certain extent, smell, see, and hear with its skin. But it simply had a greater variety of surface receptors than we who receive but temperature and touch sensations that way.

The sense organs by which we become aware of odors, sights, and sounds are technically called distance receptors because we refer the sensation to a more or less distant object. We think the perfume is in the flower, the light is in the electric bulb, and the sound is in the piano, although we may know scientifically that all these odors, sights, and sounds are within our heads.

These distance receptors are of vast importance in the study of the arrival of mind in animals. Dr. George H. Parker, Professor of Zoology at Harvard University, says of them on page 110 of *Human Biology and Racial Welfare*, "They are undoubtedly the most important single factor in the evolution of the vertebrate brain for without them we would have remained simply spinal-cord animals."

The sense of smell seems to have come first, a fact which surprises us who consider it the least important of the senses. In the civilized city man, that sense has somewhat atrophied, compared with its keenness among savage and semicivilized men. Some of the animals, the deer for instance, depend upon that sense for the safety of life itself. 

In the amphioxus, an early marine animal, there are neither eyes nor ears, but the organ for smelling has already reached a state of considerable development, and the end of the spinal cord near the head

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is somewhat enlarged. This small bulbosity, of seeming insignificance, nevertheless contains within itself the possibility of all the vast civilization of today, the product of the brains it foretells.

The second distance receptor to develop was the eye, of which there is a vague hint in the amphioxus. Lampreys have eyes, but their ears are very embryonic, hardly worthy of the name ears. Early vertebrate ears were more for maintaining the balance than for hearing, but the sense of hearing developed along with equilibrium until in some quadrupeds the ear reached a very advanced stage of evolution. Human beings have not as accurate a sense of sound-reception as some other animals, but it is possible that the progress of aviation may result in a rapid improvement of the sense of balance and position after a few generations. By the same token, we may lose even more of our sense of hearing, unless the noise of the modern airplane engine is greatly reduced in the coming decades.

With the development of the three distance receptors came a great and concomitant growth of the brain. The bulbous tendency at the head end of the spinal cord of the amphioxus soon developed in the succeeding but still early vertebrates into two lobes, the forerunners of the hemispheres of the brains of the higher mammals. These lobes were at first olfactory in function, but gradually took on an additional use.

When the appearance of the other distance receptors of sight and hearing made necessary a correlation of the information thus coming to the

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organism, that correlating center was established, not in a new organ, but in the oldest and most highly developed part of the brain, namely, the olfactory lobes. Here were received all the sensations, from skin, nose, eyes, and ears; here they were unified, and, in a sense, interpreted. With this integration of sensations a tremendous step upward in evolution was taken.

Still another task was taken on by these growing hemispheres. They became the headquarters for the direction of all the motor activities of the organism. The motor centers which had been functioning in other parts of the organism moved to the hemispheres of the brain; not all of them, for the spinal cord and the so-called sympathetic nervous system retain even in man some of these functions, but the hemispheres of the brain slowly assumed such a preponderant part of the work of adjusting the organism to its environment that the primacy of the brain was forever insured.

These functions of correlation, integration, and adjustment required more room for their office as the process of evolution went on; and the olfactory lobes were submerged by the superstructure erected to take care of the additional work. This superstructure is called the neopallium. Its rapidly growing size in the higher mammals and its huge proportional bulk in man reveal it as the seat of mind or consciousness.

In other words, the arrival of mind in the animals is, physically speaking, the advent of the developed neopallium.

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Step by step can be traced the evolution of the nervous system and its highest development, the brain, from the first reactions of protocyte and amoeba, through primitive forms which received all their information about their environment through their skin, then through the long series of animals with noticeable brains, to the mammals in which the neopallium indicated a fine adjustment to the outer world.

The growing neopallium made possible the accumulation of experience, the formation of habitual responses and instincts, the building up of racial memories, and even the beginning of choice and judgment. Mind was arriving.

In order to determine the point in evolution when the animal may be said to have a mind, it is necessary to define mind. If a person is still under the impression that all animals below man act only from instinct, while man acts from reason, then the coming of mind must be reckoned as an event of the human era.

Psychobiology, however, has taught us that man's own acts are largely instinctive, while animals undoubtedly exhibit intelligence and even reason.

Dr. Robert M. Yerkes, Professor of Psychobiology at Yale University, states the modern point of view as follows in *Human Biology and Racial Welfare*, page 117: "For the ancient inadequate formula, 'Man is rational; brute, instinctive,' the present day psychobiologist substitutes the statement: Every living organism, by virtue of inherited structures and de-

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velopmental tendencies, is instinctive and also in widely varying degrees capable of individual adaptations which are more or less definitely intelligent." He recognizes, however, that "intelligence differs both quantitatively and qualitatively." It is evident, then, that mere intelligence does not constitute consciousness or mind, for intelligence, of a sort, is found among animals which cannot be said to reason or to have ideas.

The point is reached when an animal can be said to have a mind if that animal intentionally and purposively changes his environment to suit his needs. Then he may be said to have an idea, and ideas are the stuff of which consciousness is made.

To put it another way, the second crisis of evolution, the arrival of mind in animals, is reached when animals which before have adjusted themselves to their environment begin with foresight and constructive ideas to adjust their environment to themselves.

Recent investigations have proved that the anthropoid apes act as if they possessed reason, had definite ideas, and went through certain elemental processes of thought. They may therefore be said to have minds and to be conscious. Some monkeys also approach very closely to the edge of consciousness, and it is difficult to convince some owners of very intelligent dogs, horses, and even elephants that these quadrupeds do not possess minds exhibiting something very like consciousness. But these latter animals have not yet been definitely proved to reason or to have original constructive ideas as do the great apes.

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The latter evidently represent a stage of evolution similar to one through which our own primate ancestors passed on their way to become man.

When those ancestors of ours first began to have real ideas and to modify their environment instead of always adapting themselves to that environment, they may be said to have arrived at consciousness. They were not yet human beings, just as apes are not human, for they were not self-conscious; they did not know themselves as selves. That was as yet far in the future, but they were a long way from the amoeba and even from the early vertebrates.

The road from the first living thing to an animal with mind was a long one. We have merely touched upon the intermediate steps. They may be summarized as follows:

The reactions of the first living minute organisms to their surroundings led to the formation of habits, or, to use modern phraseology, behavioral adaptation took place. After evolution had proceeded, certain instincts were noticeable. For a very great length of time, instinct served all creatures as a means of getting along, but, as surface receptors were supplemented by distance receptors, the brain developed and in due time intelligence appeared, soon to be followed by foresight, reason, ideational processes, and mind itself.

When there arrived the animal who could think, even though that animal was still acting from instinct nearly all the time, a great stride in evolution had been taken. Previously he was the world's: now the world was his. He could, painfully and slowly, but

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nevertheless with increasing confidence, make that world over to suit him. The simian that fastens two sticks together to secure the fruit that he could not reach with either stick separately is already a tool-maker.

CHAPTER THREE

THE THIRD CRISIS OF EVOLUTION

THE ATTAINMENT OF SELF-CONSCIOUSNESS IN MAN

THE FIRST CRISIS of evolution was when matter developed life; the second was when life developed mind; and the third was when mind became self-conscious.

When our primitive ancestors developed brains complex enough to permit them to emerge from the purely instinctive forms of behavior, to have the simpler type of creative ideas, and to be able occasionally to change their environment rather than always to adapt themselves to it, they may be said to have become conscious and to have achieved minds.

They had ideas, but no idea of themselves; they thought, but they did not know they were thinking; they were conscious, but not self-conscious. The emergence of self-consciousness in these animals was necessary before they could become human beings.

Between the first animals with minds and the first really human beings there stretched a long upward climb. It was a climb in one sense, but the very

opposite in another. There seems little doubt that it was the choosing of terrestrial life rather than existence in trees which separated our ancestors from the simians.

"To be more than apes," says Dr. Frederick Tilney in *The Brain From Ape To Man*, page 982, "it was necessary for them to shed that stigma which tree life stamped upon them. This the modern apes never accomplished . . . It was the foot that led the way, producing a supporting structure having a well-developed heel, a non-opposable hallux (great toe), and a heel-toe timing formula in walking. At some later period in the Miocene the two great branches of the orthograde primates parted company. The structural decision at this juncture was a critical one. By it the apes accepted the trees as their lot, and man, because of his two human feet and what they supported above them, acquired the earth with all it contained. Thus, with arboreal life a thing of the past, with a true ground-gripping foot and plantigrade bipedal locomotion, with longer legs and actual erectness for effective transportation, the hands were finally liberated for the purposes of human success."

In other words, when the apes chose the trees, they entered a blind alley. When all four limbs must be used for travel, two of them are prevented from becoming hands, and hands are necessary for civilization. And if two are to become hands, the other two must take over the work of locomotion, and must be changed in many ways for the double task.

It was not merely the freeing of the forefeet to become hands that was involved when feet developed.

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The erect posture was made possible and necessary, and the erect posture meant other advances, such as better vision and a whole series of exceedingly important changes in the field of sex relations, changes which made society itself possible.

Before proceeding to those developments, however, it is well to ask how it happened that the type of animal that was to become man, "the sixth family of the suborder of Anthropoidea, known as the Hominidae," left the orthograde stem of the primates some twenty-five million years ago, and grew unto themselves two feet in place of four.

They certainly did not say to themselves, "Go to, now, we will develop two feet that we may have two hands." That would imply that they already had human brains. What was the biological reason for the change?

Probably some alteration occurred either in the environment or in the bodily structure of these distant ancestors of ours which made them take to the ground. Food may have become scarce in the trees and they may have gone below to eke out their supply by eating roots and low-growing plants. (Something of the sort seems to be happening among the gorillas due to their fondness for wild celery.) With a taste developed for ground food, there was no need of returning to the trees.

Or it may well have been that glandular changes had brought about such an increase in size that these primates found it increasingly difficult to get about in the trees and more and more comfortable on the ground.

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Whatever the cause, once on the ground for any considerable time, the differentiation in the use of the limbs was inevitable. Already, while in the trees, they had begun to assume the squatting posture for convenience while eating, as we know from the monkeys. On the ground, squatting would easily become sitting, and the first step toward the erect posture would have been taken.

And on the ground, among the shrubs and grasses, the animal would rise frequently upon his hind legs to look about for enemies and for food. The curved backbone would gradually straighten; pelvic changes very slowly would occur, and the hind feet would accommodate themselves to the changing use. The opposable great toe would have two reasons at least for getting into line with the other toes. On the ground it would be a nuisance, constantly getting caught in grasses and stubbed on stones. Besides, it was no longer necessary for holding objects, as the forefeet were becoming hands.

All these changes in structure and function meant corresponding alterations in the brain, and the brain's growing complexity made room for still further developments. Evolution was proceeding apace.

The erect posture made possible a rapid development in the eyes and ears, those distance receptors which we have already noted as of immense importance in the evolution of the brain.

But it was the gradual extension of the use of the hand which most contributed to the development of the brain. The use of tools has educated the race.

Museums are filled with the ancient tools of

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primitive men, hardly men as yet. From the eoliths, the earliest stone implements, so crude as to be hardly distinguishable from ordinary stones, on through the rough scrapers and axes of the Paleolithic Age and the hammers, daggers, knives, and arrowheads of the Neolithic Age, to the bone and bronze implements of later times, is traceable a remarkable and interesting record of the increasing dexterity of the freed fore-foot, now become a hand.

These ancient progenitors of the present race were developing their hands, and their hands were educating their brains and preparing them for further evolution.

Century by century, millennium by millennium, age by age, the neopallium was increasing in size and convolutional complexity. The simian fissures were disappearing and the frontal lobe was growing. Man was getting ready to be man.

In order for man to be really man, that is, in order for this being which had passed the second crisis to attain to the third, self-consciousness, it was necessary for him to learn to distinguish himself from all things around him. But before that was possible, he must learn about the things around him. And the development of his hands was one of the chief factors in his getting acquainted with his environment.

The hand is primarily a prehensile mechanism. It serves not only for the seizure of food and for defense and attack in personal encounters, but also for exploration of the environment. The hand learned to grasp, to hold, to twist and turn objects, and, in conjunction with the arm, to pull and to push that which it

grasped. Through these motor contacts the brain was able to get an idea of the size, weight, shape, contour, roughness or smoothness, dryness or wetness, heat or coldness of the objects which the hands touched, stroked, lifted, pushed, and pulled. The hand also brought objects nearer for closer examination by the eyes, the nose, and the tongue.

All these processes, and the correlation of the information brought by them, required the brain to develop additional powers.

Moreover, and of greater importance for our inquiry, this exploration of the environment by means of the hands set up the foundation for the psychological structure necessary if the individual were ever to distinguish between self and not-self. He must learn what he was not before he could learn what he was.

In other words, the content of his consciousness must be greatly enlarged and must become varied before he would have sufficient images in that consciousness with which to form a correct picture of himself.

He learned a thousand things about himself from the objects which his increasingly sensitive hands touched. The round stone was like his own head. The protuberant knot of the tree resembled his own nose. The short grass by the spring, worn down by his frequent visits there, was like his own hair. The short thick stick was like his own arm, and, if he took it by one end, his arm was lengthened. A small boulder, seen in the dim light of dawn or dusk, resembled one of his own kind in squatting position.

The physical likenesses were gradually supplemented by more subtle and less tangible resem-

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blances. Thought was growing by the assembling of ideas, and particularly by the association of those ideas. The ability to compare was developed by seeing and noting physical likenesses, and, in time, that ability was used in noting other resemblances.

Particularly would the growing intelligence be apt to see the similarity in behavior of other animals and himself under conditions, for instance, of thirst and hunger, of fright and anger.

There would also inevitably become evident to him the likeness of his own conduct to that of others of his kind. Still later, there would naturally come the time when his dawning self-consciousness would recognize differences between himself and others. His growing ability to compare would lead him to notice that he was taller or shorter than his rival or enemy. At first that consciousness of the difference between himself and his rival would be largely confined to a dim sense of superiority or inferiority. He would fear the larger one and scorn the smaller.

But when the one smaller than he would, through some cleverness, defeat him in a fight, his chagrin would compel at least a sense of wonder as to how it happened. He might attribute his defeat to some magic in the club which the other had used, but, at any rate, his failure would be a stimulus to thought. And if he won in a fight against a larger antagonist, his sense of pride in the exploit would be sure to result in a strengthening of his growing sense of individuality.

Thus, through contact with his environment and contests with his fellows, there was built up in the

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process of time a feeling of self-ness, which was the dawning of individuality. And in the whole chain of changes in his brain structure the direct cause was his growing ability to use his hands more dextrously.

Another important result of his increasing manual dexterity contributed indirectly to the building up of his self-consciousness. In his first centuries on the ground, this pre-homo, this man-to-be, was largely occupied with the problem of mere existence. It took all his time to secure enough to eat. He had not only keen competition from the other animals, but also ferocious opposition. Life was one long fight, and not always a very long one. If he reached the age of thirty, he was probably one of the old men of the tribe.

But, when his hands and brain were clever enough to manufacture effective weapons, there came periods of comparative leisure, and his life span lengthened. His brain gave him an advantage over the less intelligent adversaries. His stone-tipped lance enabled him to strike down the beast before it could reach him with its sharper claws and teeth. He learned to make simple traps. He invented the bow and arrow. He discovered, after a long time, that seeds could be gathered in the fall and kept dry during the winter and planted in the spring. Probably this discovery came from having saved certain wild grains for a winter food supply.

These inventions and discoveries all resulted from his ability to use his hands and from the increased ability to think, which his hand-use had slowly brought about.

The Attainment of Self-Consciousness in Man

Now the way in which this manual dexterity indirectly caused the development of his self-consciousness was this—it brought about a greater and more varied food supply and therefore increased his leisure. And in his leisure his busy hands and brain turned to more delicate operations. He improved his tools and experimented in ways to make them keener and stronger. He devised simple utensils from dried skins, from wood, and later from baked clay. He noticed that the impressions of his fingers on the soft clay made a simple pattern, and, almost whimsically, he varied the pattern, with pleasing results. He observed that a leaf, carelessly left on the clay before it hardened, left its outline, and it was not long before he was putting several leaves on intentionally, and even scratching rude figures of the sun, or a tree, or an animal.

Art was being born in his mind. And when art arrives, with consciousness of beauty, the brain is rapidly reaching the point of development when the individual is able, as we say, to express himself. When he could draw a rude picture of himself, either with a stick on hardening clay or with a bit of charcoal from the fire, he was, to a certain extent, at least, conscious of himself.

Fire helped too. He had learned to overcome his primitive fear of it and to use it to make his food more palatable. He used it to harden his weapons and to warm himself on cold nights. And as he sat before the fire at the entrance to his cave, from which by virtue of his weapons he had driven the beasts which once monopolized it, he had thoughts.

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Even today we use a fire to stimulate our thoughts. If we do not have the luxury of an open wood fire, we find a partial substitute in candles on the dinner table. Something there is about a blaze, and especially about smoldering embers, which makes it easy to think.

Before his fire, then, the dawn man relived the day's chase. At ease, with his belly full of good food, he relaxed and pondered. He looked up at the stars and wondered about them. Perhaps they were campfires, too, of some distant beings like himself, but greater.

His fire became the place where his fellows gathered to sit with him, to express with grunts and gestures the things they wished to communicate.

For the evolution of the hand had led also to communication and speech, both oral and written.

The creatures which came down from the trees had had a very primitive system of cries and sounds by which they could convey to each other the simplest impressions. Probably the first sounds made by the animal throat and larynx were partly vocalized exhalations of breath, expelled through sudden fear or pain. Mothers made soft crooning sounds to reassure their babes. Then, in battle, men would utter cries of menace and defiance. Sounds came long before words, and the first words were, as with our children, merely repeated sounds, like "Ma-ma."

The hand played its part, and a large part, in the development of means of communication, both oral and written. Gestures conveyed unmistakable meanings before words were invented. Let two men of dif-

The Attainment of Self-Consciousness in Man

ferent speech meet today and there is recourse to primitive sign language, in which facial contortions and bodily attitudes express much, but motions of the hands more.

When mere motions fail, there is an instinctive tendency to make with the hand a symbol representing the thing one desires. And if that is impossible, the next recourse is to trace a rude picture of the thing with the forefinger or a stick.

In some such fashion language arose. The picture writing of the American Indian, the hieroglyphs and phonograms of the early Egyptians, the Babylonian cuneiform writing, the Sanskrit, Hebrew, and Arabic letters, and, finally, the Phoenician and Roman alphabets, show the progress made in the development of communication by symbols.

Language was of immense importance in aiding man to discover himself. Ideas are usually rather vague until they are spoken or written down, for the reducing of an idea to a symbol or series of symbols requires that it be limited and formulated and distinguished from other related ideas. The mental effort required to concentrate upon even a simple idea, to formulate it and reduce it to a written symbol, was an exercise which stimulated the concept-making part of the brain. The more concepts man acquired, the better was he able to conceive the rather abstract idea of self. And the more victories he achieved in the field of communication, the more confidence in himself he gained and the more he became aware of himself as a creative force.

When a man makes a gesture to convey an idea,

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he feels an impulse to make an accompanying sound. At first the sounds were probably an attempt to imitate the sound which the object makes or which is naturally associated with it, but as oral language developed, certain arbitrary sounds, modified in various ways by using the lips, tongue, teeth, and buccal and nasal cavities, were agreed upon.

Similarly, when words are written, there is a desire to vocalize them. Oral language preceded written, and it was natural to attach the spoken sound to the written symbol. Various sounds and signs were used by separated tribes and thus the different languages arose. The importance of language in the development of personality is revealed today by the fact that the acquiring of another language than one's native tongue enriches and develops the mind and broadens the whole personality. One not only adds to himself the experience of another race of men, but he also develops his brain by creating a whole new set of connections within it.

The evolution of the speech centers of the brain was probably the culminating accomplishment which made human self-consciousness possible. The attaining of bipedal locomotion, with the accompanying erect posture and all that went with it of evolution in the distance receptors, the freeing of the forefeet to evolve into hands with which to mold the environment and educate the brain, the consequent growth of gesture, oral, and written language: all these were the steps in the coming of self-consciousness in man.

CHAPTER FOUR

THE PRESENT STAGE OF EVOLUTION

THE EVOLUTION OF HUMAN PERSONALITY

[1] SELF-RECOGNITION

WHEN the evolving animal reached the stage of self-consciousness and thus became man, he could be called man only in the most limited use of that term. He was what is sometimes called, poetically, the dawn man. He was but dimly aware of his separateness from his environment, and the idea of his individuality was still hazy in his mind.

He was man only in the biological sense—man as distinguished from the other animals. All the present-day richness of content and connotation of the words, man, manhood, and manliness, was still to be attained. He was a personality largely in possibility. Before man could reach the next crisis of evolution, cosmic creative consciousness, his self-consciousness must expand and deepen, and his personality must evolve through thousands of years.

We are at present in the period of the evolution of human personality when the self-conscious man is

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in process of becoming the cosmos-conscious man. Naturally, our contemporaries are not all at the same stage of development in their evolution. There are on the earth at this moment primitive savage men who can hardly be said to have attained self-consciousness, and there are, on the other hand, persons who seem to be in the process of attaining cosmic consciousness.

In between, the overwhelming majority of men are to be classed, in all gradations of personality development, representing every stage of psychic growth through which the advance guard of the race has already passed.

Before we can proceed to the consideration of the approaching fourth crisis, we must needs trace the steps of progress man has taken thus far in the evolution of personality. To do this is necessary not merely in order to fill in the gap and make our rapid survey of the evolution of life complete, but especially to prepare the background for portraying cosmic consciousness as an outflowering and quintessential development of perfected personality.

Someone has said very beautifully that the cosmic energy slept in matter, dreamt in animals, and waked in man. The statement summarizes very well the essence of evolution up to man. Man is energy become conscious of both his energy and his consciousness. But the long period when his ancestors were energetic but not self-conscious has a tremendous effect upon him still; he inherits a tendency to action rather than thought. He was so long an animal before he became a man that animal behavior is easier for him than man behavior. He has constantly

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to fight mental inertia. It is so much easier to pace the floor and worry than to sit quietly and think.

"Thinking is the most efficient method yet discovered for nature to carry on through us her evolutionary career," said John Dewey, and a more challenging statement was never made by man to man. Thinking is our main business as men, and our greatest responsibility. Nature has given us the most valuable product of all the long centuries of life behind us, namely, the ability to think and the consciousness of it.

From the time of the first self-conscious men on, evolution began gradually to be partly the responsibility of man himself. Before him, evolution had been largely blind, dependent upon chance and trial-and-error-or-success. In him it became partly conscious, creative, responsible. Chance and experiment still remained, but in slowly decreasing ratio. Sleeping matter and dreaming animals still continued upon the earth, but man, their eventual master, had arrived, and began to assert his "dominion over the fish of the sea, and over the fowl of the air, over every living thing that moveth upon the earth, and over every herb bearing seed, . . . and every tree." As his knowledge grew he would learn to control the untamed forces of nature, and manipulate at will the chemical elements of the earth, even to the splitting of the uranium atom.

But to do all this, he had first to develop his own personality.

Now the elements of personality are three. At least they can be included under three main heads—

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self-recognition, self-determination, and self-communication. These are not entirely exclusive of one another; in fact, they overlap and intermingle. In a well-developed personality they interlock and blend into a well-balanced and unified whole.

But these three characteristics of personality, in the order given, afford us an outline of its evolution.

When self-consciousness arrived in the erect biped mammal, *alalus homo*, through the development of his speech centers, he may be said to have attained to a measure of self-recognition. Indeed, self-recognition is implicit in self-consciousness, for which it is, perhaps, a better term. Self-consciousness has today the secondary meaning of "conscious of oneself as the object of the observation of others," and hence connotes embarrassment.

Self-consciousness has been analyzed as containing two elements, self-grasp and self-estimate, and self-recognition would also include them both. The element of self-grasp is the ability to hold the concept of one's own identity as a thing separate and distinct from one's surroundings and associates. The element of self-estimate is the ability to appraise one's own significance. Both are phases of self-recognition, for self-grasp is recognizing one's individuality, and self-estimate is recognizing one's importance, whether it be great or small. And the words, significance and importance, in this connection do not refer primarily to social standing, business ranking, or cultural eminence, but to one's worth as an individual, any individual.

It is obvious that the dawn man could have had

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little self-recognition compared with what is now possible. His self-grasp was not at all sure, for the line between self and environment was hard for him to determine, even if he had seen the need for it.

In imagining the psychological condition of that early man with special reference to this matter of his grasp of the idea of his own individuality, it is important to consider by which of two ways it came about that he learned to distinguish self and environment, and so arrived at the point of self-consciousness.

Did he previously think of everything around and in him as part of himself? That is, was there to him but one entity which was himself, so that he thought of his lance, his mate, his neighbors, his tribe, his food, and even the stars as nearer or farther parts of one thing, himself? And was his coming to self-consciousness a sudden realization that there were parts of this whole arrangement which were not himself at all, and which would go on whether he were around or not?

Or did he, on the other hand, before he came to self-consciousness, think that the whole scheme of things sort of ran itself, and was his waking to self-consciousness a feeling as if a new thing, himself, had suddenly been projected into the picture as a part of it?

In other words, was his realization of his individuality a stripping away from his consciousness all but himself and a putting of the stripped-away part in a new category, called surroundings; or was it, instead, the sudden entrance into his consciousness of a new thing altogether, namely, himself?

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At first thought, one would be inclined to the latter view, but an examination of the psychology of savages and children gives evidence in favor of the former.

The very primitive savage and the very young child take everything in sight because each considers it a part of himself. Of course, he would not really have the concept, self, in mind, for where there is no not-self there can be no self. But everything is one, and he is the one. To the pre-self-conscious savage, his club is almost as much a part of him as his arm, of which it is an extension. If an enemy takes from him his club, or his wife, or his favorite hunting ground, his bitter resentment is due to the fact that the enemy is spoiling the unity of the picture.

There was a pre-Babylonian king in Mesopotamia named Lugalzaggisi who delighted in calling himself "Lord of the Totality." No king since, however imperialistic, has been able to assume a more inclusive title, but every child has a period when he considers the universe and himself identical. As he grows up he learns that life is a series of subtractions from his ego.

The self-recognition of the first dawn men, then, was a realization, to a certain extent, of separation, apartness, limitation. Did they therefore feel lonely and humiliated?

Probably only to a limited degree. When the child awakes to his selfhood, and realizes his own identity, when there comes the thought that no one but himself knows how he feels, there is a sensation of awful loneliness. It usually comes after he has been

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misunderstood by someone who, he had thought, knew just how he felt. When he finds that even his mother and father cannot enter into his private consciousness and see things there as they really are, in spite of all his efforts to make them understand, there comes a sense almost of despair at finding himself quite alone in his inner self.

But the despair quickly passes, not simply because the rapid events of life crowd in, but fundamentally because the sense of being alone is quickly followed by the consequent feeling of responsibility. If one cannot always be understood by others, then one must act for oneself. No one else knows what is the right thing for one to do. A mighty sense of freedom comes when the child first takes an important step for and by himself. It is quite intoxicating. To the parents the child seems to have suddenly become disobedient. Punishment follows, which serves but to strengthen his sense of separateness and individuality.

He knows he has been disobedient to them, but he also knows that he has been obedient to his newly discovered self. His individuality is strengthened by the feeling that he is suffering for the truth. Some day parents will learn to recognize the first disobediences of the child as a sign that he has come to the period of self-recognition, and will give him certain areas of freedom where his new-found self may have room to grow.

In a similar way, the first men on this earth, when they arrived at the loneliness of self-recognition, found that loneliness quickly dissipated by the freedom they thereby attained. When they had felt

themselves a part of everything, they had been hampered by that bond. Now they had lost some of their security, but they had also lost some of their chains.

Quite likely, too, they were punished in some way. No one can step out in advance of the crowd without suffering the crowd's disapproval. Strange to the anthropoids must have seemed the first men. They were no different in form or feature, but their actions must have been noted as different upon occasion. There is nothing on earth today so bitter as the treatment given to the advance guard by the mob behind. But it is not so bitter as that suffered by the leaders of yesterday. Let any animal act a little differently from the rest of the herd, and they will turn and rend him.

And when the dawn men were persecuted by the almost-men, the result was probably, as in the child, a strengthening of the new sense of individuality by the widening of the gap between those who had discovered themselves and those who had not.

The distinction between self and environment was only gradually realized. To learn the limits which marked the end of one's individuality and the beginning of the outer world required time. It also required a development of that part of self-recognition which we have called self-estimate.

Self-estimate, self-appraisal, self-inventory, self-knowledge—these are all words to describe the primary duty of man. When he first awakened to selfhood and freedom, and started on the long path which eventually led to civilization, he made many embarrassing mistakes at first. His greatest handicap was not the opposition of others; it was his sad ignorance

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of himself. He did not know either the upper or lower limits of his own ability. He was constantly overestimating and underestimating his powers. When he expected too much of himself, then came failure and discouragement; when he expected too little, someone else walked off with things he wanted. And there were many tasks which he felt sure he could accomplish, but he was unable for long years to discover the way. Many of his desires had to wait upon other achievements for their fulfilment.

It can be said with no exaggeration that the whole history of man has been the record of progressive self-discovery.

Self-recognition was urged by the great prophets of mankind. When Socrates went about saying, "Know Thyself," he was but repeating what was written even then over the doorway of a famous temple as a quotation from an ancient sage, who probably got it from someone still further back.

But all the efforts at self-examination made slow progress, comparatively speaking. Men did learn much by the patiently garnered results of experience, but inasmuch as each generation uniformly questioned the wisdom of the preceding one, a man was usually ready to die by the time he knew how to live with himself.

For many weary centuries man proceeded by the trial-and-error-or-success method in his attempts at self-discovery, simply butting his head against the hard wall of his environment. And all the time, like Christian in Doubting Castle, he was carrying the key

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of knowledge around with him, in his own head, and didn't know it.

It seems incredible to us today that men should only recently have discovered that they think with their brains. When the very first self-conscious men appeared, they had brains of very nearly the same size and general pattern as ours today. But thousands of years must pass before the thinker would discover the physical mechanism wherewith he did all his thinking.

As late in the evolution of personality as Bible times, there was no conception whatever of the function of the brain. In fact, the words, brain or brains, do not occur anywhere in the Bible. The people of that day thought they thought with their hearts:

Proverbs 23:7—For as he thinketh in his heart, so is he.

Isaiah 10:7—Howbeit he meaneth not so, neither doth his heart think so.

Mark 2:8—. . . he saith unto them, "Why reason ye these things in your hearts?"

The Hebrews were only a little nearer to the correct physical location of the organ of thinking than the Babylonians, who thought they thought with their livers. And the Hebrews thought the conscience was located in the kidneys!

It is true that Alcmaeon of Crotona, who lived 500 B.C., identified the brain as the only seat of the mind and as the source of both feeling and movement, but nobody paid any attention to him. Five centuries later, Jesus Christ still located the reason in the blood-pump, where the vast majority of Christians still lo-

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cate the emotions, in spite of the fact that Paul placed the emotions in the bowels.

Plato, it is true, connected the mind with the brain, but considered that the brain was composed of marrow, made out of the "primary triangles."

Even Aristotle, whose philosophy still influences the whole world, decided, after the dissection of a cadaver and the examination of the brain, that the organ was so cold that it doubtless served for the refrigeration of the blood!

Galen, in the year 160 A.D., definitely established the brain as the seat of the mind, but very little more was known about it until a century ago, when Ehrenberg with a microscope discovered a nerve cell in the spinal ganglion. As late as 1618, Dr. Crooke seriously stated that it was evident that the purpose of the hairs of the human head was to lead off "the vapours which otherwise would choke and make smoaky the brain."

When Broca, in 1861, identified the third frontal (Broca's) convolution of the brain as the seat of articulate speech, real progress began to be made. Hundreds of brain anatomists and scientists, Huntingdon, Tilney, Riley, Osborn, and Gregory, have added greatly to our knowledge of the evolution and structure of the brain. And many psychologists have contributed to our understanding of the origin, powers, and functions of the mind. —

This knowledge is still largely confined to scientists and is only gradually percolating into the strata of common knowledge. When it is more generally known, only then will it be possible for the average man to come into a real knowledge of himself. Self-

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recognition has had to wait for science to make possible an understanding of the workings of the human mind.

We may therefore expect tremendous strides in the evolution of human personality when self-understanding becomes possible to many through the dissemination of a knowledge of the brain and the nervous system generally, a better appreciation of the principles of psychology, and a practical working knowledge of typical behavior forms.

Surely, if the brain is, as Dr. Tilney points out in his first sentence, "the master organ of the body, the regulator of life, the source of human progress," then a study of the principles and laws which govern our thinking and behavior ought to have as large a place in our school curricula as our recent devotion to commercial and money matters has insisted on for arithmetic.

There can be no morality or character till the laws of behavior are understood, and it is appallingly obvious to all thoughtful observers today that our progress in civilization is now halting for the reason that morality and character have been sacrificed in our education because we have given too much attention to things of less fundamental importance, both to the individual and to the race.

The primary significance of self-recognition in the evolution of personality is evident. Every other element in personality depends upon the increase of self-knowledge, with a clear-cut appreciation of one's individuality and consequent freedom and responsibility.

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But we must be eternally careful not to fall into the error of assuming that there is such a thing as an isolated individual. We are, it is true, separate selves and we are free. Yet that freedom is limited and that separateness may be more a mental state than a social fact.

As our social fabric grows in complexity, the idea of the individual as an entirely separate entity is more and more seen to be somewhat of a delusion. Hardly has man attained to the ability to recognize his individuality when he is met with the doubt as to whether or not he has any individuality worth recognizing. He finds himself, after all, still a part of his environment, and it might seem that he was back where he started from in the old pre-self-conscious days. But there is this difference, at least; namely, that he now is aware of his self as being part of the totality of his surroundings, when before he was not conscious that there was either a self or an environment.

Furthermore, although the recent rapid integration of society has brought about increasing standardization and regimentation, with an almost intolerable social pressure on the individual, there is apparent at the same time a surprising growth of freedom for the individual. And although the behaviorist can demonstrate that our behavior patterns are determined for us before we reach maturity, there was never such a time when individuals kicked over the traces, broke conventions, and changed their own habits as in this very period.

As a matter of fact we are entering, just entering, the era of self-recognition by man, the era of the asser-

tion of individuality. We have, it is true, a temporary relapse in some parts, such as the phenomena of political fascism and regimented communism, but these forms of government have been sought as a refuge from the chaos of war and its consequent upheavals. In the field of industry we are still in the shadow of "Fordismus." And regimented authoritarian religion still flourishes in some regions.

But the revolt is already gaining ground. Individualism, rising and rampant, may be observed in many places and in many spheres of human life. The human spirit is aware that in the coming social structure the individual will be obliged to sacrifice much of his freedom, but he is determined that he will sacrifice only that much which will secure him the maximum of liberty with the minimum of social rules.

Witness the revolt against prohibition of alcohol-containing beverages in the United States, which was plainly and primarily an assertion of the rights of the individual. Witness the growing protests against regimentation in industry and standardization in articles of use and beauty. Witness whole nations overthrowing authoritarian religion. Witness the revolt of women against marriage and the double standard. Witness the misunderstood but very earnest and high-minded revolt by the nudists against even clothes.

This assertion of the rights of the individual, which is really an outgrowth of the culmination of self-recognition, is also a demonstration of the growth of the second of the elements of personality—self-determination.

CHAPTER FIVE

THE PRESENT STAGE OF EVOLUTION

THE EVOLUTION OF HUMAN PERSONALITY

[2] SELF-DETERMINATION

IN THE EVOLUTION of personality, whether in the life of the individual or in the history of the race, self-determination starts very soon after self-recognition arrives. Take the child. When he awakes to an awareness of himself, there occurs the brief period of loneliness, followed by the sense of freedom and the beginnings of responsibility. When the child makes his first decision for himself, he has started on the road of self-determination.

Now just as self-recognition has the two elements of self-grasp and self-estimate, so self-determination includes self-direction and self-development.

Self-direction is the ability to choose and follow one's path, and to remove, overcome, or circumvent the obstacles in that path. When the child discovers himself and sets out on a few experimental journeys around the room or through the house, he soon realizes that what seems very easy for the older people of

the household is very difficult for him. There are doors which impede his progress when they are shut. There are stairs which present a new problem in locomotion. At first he merely cries in vexation at the obstacle. The cry brings mother or the nurse and the door is opened for him, or his attention is distracted to something else. But there comes a time when the cry does not produce the desired result and the child begins to attack the problem of getting the door open himself. Pushing against it seems useless. After a bit he notices that when an adult opens the door, it is done by grasping a shiny round thing part way up one side of the door.

That thing is beyond reach, but he has already discovered that his plaything box is of assistance in similar situations, and so he brings it into use. It takes but a few experiments to find out what motion results in the opening of the door. The first time, he is surprised when it opens, and falls through into the next room, but he smiles through his tears over the bump, because he has tasted a real triumph in self-direction. And all through his life he finds that his progress in self-determination is a matter of learning how to open doors.

Similarly, it was true of the racial man. It was not long after man first learned to recognize himself as apart from matter and the other animals before he found that he had to a certain extent power over matter. In spite of the fact that he frequently found himself the sport of circumstances, and more frequently faced with problems which he could not solve, he

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nevertheless rejoiced at his growing ability to get where he wanted to go and do what he desired.

It is difficult for us at this distance to appreciate the great satisfaction with which the first men regarded the devices which they had invented to enable them to overcome the obstacles in their path. The knife, the bow and arrow, and the boat, all represented tremendous triumphs over environment, milestones on the road to self-determination.

With the flint knife, much could be accomplished which had hitherto been done with difficulty if at all. With it, the dawn man could defend himself against beasts and other men; he could smoothen rough objects and reduce in size those that were too large. With varied forms of the cutting edge, such as the scraper and the axe, he was able to prepare skins for clothing and hew trees with which to make a shelter as well as prepare wood for his fire.

With that knife, too, he could shape his bow and arrow, and he tipped the arrow with another form of knife, double-edged. And with the bow and arrow he strengthened his growing power many fold.

The boat, however, was one of his greatest triumphs in self-direction. Rivers and lakes had long presented serious obstacles to his journeys. When the first adventurer straddled a log and paddled his way across a body of water by using his hands or poling with a stick, transportation had begun. Such refinements as hollowing out the log, giving it a keel or an outrigger, adding oars, sails, and much later an engine, came as a matter of course. The ocean liner was only an improved log.

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If there were any doubt that the invention of knife, bow and arrow, and boat gave the first men a sudden access of the sense of power, one would need but to witness the great joy of the normal boy of today when he first comes into the possession of any one of these three ancient inventions. A jackknife is regarded by a country boy as not only a necessity but a joy. His pride in it amounts to an obsession. He has a reverence for it that is akin to worship. It is indeed a fetish as much as it is a tool and a weapon. Its importance is due to the facts that it is the key to power over environment, and, because somewhat dangerous, the badge of man's estate. In all this there is a very obvious racial inheritance.

So with the bow and arrow and the boat; youth's delight in them is a reflection of our far-distant ancestors' keen appreciation of their value for self-determination.

The boy with the spool-cart, then the little express-cart and the home-made gig, then the tricycle, the bicycle, the motorcycle, and later the automobile and the airplane, reproduces not only the progress of the race in vehicular transportation but also the delight and appreciation of his racial predecessors as they discovered their growing power in self-direction and overcame the great obstacle of distance.

All these inventions and the thousands of others which followed were not so much material objects as spiritual badges and symbols. They were, in a sense, as we shall treat more fully later, foregleams of immortality, for the desire for immortality is born of a sense of the limitations of personality, and any inven-

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tion which increases power and decreases the sense of limitation is, in one way, a step toward the attainment of immortality. Perfect immortality, in any religion, is always pictured as a place or a state of freedom from limitations. In other words, it is perfect self-determination. Even death, the greatest obstacle of all, will be overcome there, so death-ridden humanity fondly hopes.

As mankind rose in civilization, his victories of self-direction rapidly increased. Our own day has witnessed such triumphs in that field as no other age even began to accomplish. Timid souls trembled when man finally conquered the air. This was an invasion of the realm of God and the angels. Such impudence and impertinence would certainly be punished. One senses a fanatic sort of satisfaction on the part of some folk when an airplane disaster occurs. They might have known better, those would-be flying men: they were "flying in the face of Providence." If God had intended man to fly, he would have given him wings.

But the majority of men thrill at the rapid progress of aviation. The world had its greatest spiritual exaltation of our time when Lindbergh dramatically spanned the Atlantic alone, and has placed him, willy-nilly, among the "immortals." The immortals are always those who have advanced the race in self-determination.

Man can now go, almost unhindered, in any direction he wishes. He has explored nearly the whole of the earth, even to both poles. He has climbed the mountains and has descended into the depths of the sea. And now he flies freely over the earth's surface,

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crossing a vast continent easily in the light of one day.

Self-direction has been largely achieved, but self-determination has not; for its other element, self-development, is yet to be attained.

To be sure, much has been accomplished there. The person endowed with a measure of self-recognition and self-direction long ago discovered that there were hindrances within as well as without. He was a puzzle to himself. What he would do, he did not; and what he would not, that he did. Paul was not the first one to wish that someone would deliver him from such a body. He called it a body of death because it would not let him lead the triumphant life of self-development which he desired.

Gautama the Buddha found the answer in a sort of psychology. But his path of the elimination of desire does not appeal to all types of human temperament. He was right, however, in looking within himself for the answer. Self-development can never come without an understanding of man's own mind. Here is where self-recognition and self-development work hand in hand.

But self-development requires more than self-recognition. The study of brain anatomy and psychology is a prerequisite to an intelligent attempt to develop one's personality, and we are better equipped in that respect than any generation ever before upon the earth. There is necessary, however, something more than mere self-knowledge.

Mankind has learned, painfully and slowly and incompletely as yet, that self-development requires also an elusive, poorly defined, but generally recog-

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nized thing called character. Those men who have best developed themselves have had it. Just what it is and just how it is to be achieved are points which men have argued over and quarreled about, sometimes to the detriment of the thing they were discussing. But there is a fairly general agreement that character is essential in the individual for his self-development, that it is a socially desirable trait, and that it is attained in some measure by making right choices in crises, often in spite of temporary personal disadvantage.

It was a great achievement for the race when the first "good" man appeared. He became good by choosing the right when he could have chosen the more attractive wrong. This early person, somewhat self-recognizing and self-directing, found himself face to face with a decision. If he chose one alternative, his immediate desires would be satisfied and he would attain a temporary pleasure. He wanted to do that thing. But the other thing would afford more benefit in the long run either to himself or to others, and he was intelligent enough to know it. When he chose the harder but better thing, he probably seemed foolish to his mates and somewhat so even to himself. But he was immediately rewarded by a new and pleasant feeling of virtue. It was a feeling akin in part to that feeling which he had in battle when he faced a formidable foe in spite of the fear which weakened him within. Indeed, his moral virtue was a lineal descendant psychologically from his manly courage, as the etymology of the word, virtue, hints.

Now he liked this new feeling, and his next

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choice was therefore easier for him. Every surmounted moral crisis was a building stone in his character. He was on the path of real self-development. Others came to recognize his strength of character and were unconsciously influenced in their own decisions. A body of accepted morality thus arose through a period of time, and certain types of action were held up before the young of the tribe as desirable.

Different tribes had different standards of right and wrong, and standards also changed within the tribe from time to time. It required great courage for an individual to attempt to set up a new standard to replace the accepted one of his tribe, but it was done, and thus the self-development of the race proceeded. There is traceable in the history of mankind a very slowly rising standard of morality. Time has regularly made ancient good uncouth—time and the increase of knowledge.

For there was another difficulty in the matter of self-development. When the individual was faced with a moral choice, it was often hard to know which was the right and which was the wrong thing to do, hard to decide which course of action was individually and socially desirable, especially if the individual was not in possession of all the facts bearing on the case. And out of that difficulty rose the institutions of law, government, and education.

Law was to decide which individual was right in disputed cases and to establish a body of laws to govern future decisions.

Government was to control those who rebelled at decisions made by law and to protect the law-abiding.

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Education was for the purpose of supplying the individual with knowledge that he might be more apt to decide aright.

There were other functions for these institutions, but the fundamental reason for their existence is the stability of the state, which rests in turn upon the morality of the citizen, which is an essential of his self-development.

In process of time, all these institutions may be found to be so functioning as to impair the freedom of the individual for self-development. Then they must be reformed, revised, and realigned with their main purpose. It is a delicate task, and challenges the entire collective wisdom of the state to so balance restrictions and liberty that the citizens may live in an atmosphere conducive to the best possible self-development of personality. The ideal state is still far in the future, but its arrival will be hastened when it is recognized generally, as it is now admitted by our best social observers, that increasing emphasis must be laid upon character-education.

Another institution exists which may either help or hinder the self-development of the individual. Religion is popularly assumed to be of assistance in the development of character, and there is no doubt that it has helped many in the past.

In the best stage of its history, every great religion has set before man for emulation a great ideal of manhood.

Frequently this ideal has been personified in a god. The question whether or not a god is necessary in religion is being much debated at the present time

and will be increasingly discussed in the immediate future. Science recognizes nothing supernatural, and a non-supernatural god is a contradiction of terms as they are commonly employed.

But whether or not the ideal set before man by religion is deified, an ideal character as a goal is certainly of help in integrating the personality.

Growth comes to the individual as he solves problems, reconciles contradictions, and extends the range of his thinking, for he naturally tends to try to reduce all his impressions to an ever-enlarging unity which is himself, his personality. And it is of great assistance in that lifelong task if he can get a vision of his own possibilities and can work consciously and deliberately to make himself like the ideal man he visualizes and admires.

One of the disadvantages of having a deified ideal is that it may be discouraging. How can a mortal expect to become like a god? That difficulty is somewhat overcome practically by the idea of a mediator between the man and the god, but the trouble is that the mediator is gradually deified as well.

The psychological fact underlying either the worship of a god or the admiration of a great man is that contemplation of a great personality inspires one to emulation. Self-development is much assisted by visualization of the ideal. Jesus "saves" those who see in him the type of personality they desire to become. Abraham Lincoln saves, too, but that fact still awaits theological adoption. And a mother may be the savior of her children; a teacher, of her scholars.

The great pity about religion is that the inspira-

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tion of admiring some of the greatest men who have ever lived is denied to many because the followers of these great men set them up as statues, put a high fence about the statue, and charge admission. And in process of time, not only the disciples but the general public get the fatal idea that the statue and the great man are identical. Those outside the fence are under another erroneous impression. They think that in order to get the benefits of association with the great man's personality, they must become like his disciples, whom they frequently do not admire.

To put it specifically, does one's admiration of Gautama the Buddha make one a Buddhist? And can one not take Jesus of Nazareth as a personal ideal—even a personal savior, if you please—without becoming a Christian? If I admire Jesus and wish to take his radiant personality as the central inspiration of my life, must I therefore embrace Christianity, just because Paul's letters happen to be bound in the same volume with the earliest biographies of Jesus?

Theoretically I need not, but practically I must, because in the eyes of the world Christianity has a monopoly of Jesus Christ, who wouldn't have known what you were talking about if you had mentioned Christianity, and who certainly would have been amazed, confused, irritated, and probably downright angry had anyone imputed to him what are now the central doctrines of orthodox Christianity.

The monopolization of the world's great men of religious initiative by those who have set themselves up as the only correct interpreters of those great men has deprived millions of other men of the benefits

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they might have derived for self-development by contemplating, emulating, and striving to attain to the virtues of those glorious characters.

Moreover, since allegiance to any religious leader is popularly understood to require that all others be not only avoided but even bitterly condemned, the individual is deprived of the inspiration to be had from these others. The theory is, of course, that the one leader is sufficient, and that for a follower of Jesus to be openly an admirer of Lao-tse or Buddha or Moses is traitorous. He can admire Moses if he regards him as a forerunner of Jesus, and if he regards the law as a preparation for the Gospel. The priests of any religion, however, consider that to be a disciple of their savior or a worshiper of their god is tantamount to forswearing all others.

As a matter of fact, there is no religion which could not well borrow from some other. It is true that they have borrowed, when the defect in their own was too evident, but they have never acknowledged it. The importation was always there from the beginning, and had been implicit in the teachings of the founder—this the theologians had little difficulty in proving to their own satisfaction and that of their unthinking listeners.

But the thinking Christian today who avails himself of the advantages to be had from acquaintance with the life and teachings of all the mighty masters of religious experience will find his life enriched beyond his expectations. Each of the masters made his contribution to the solution of some of the many problems of life, and it may be that the particular difficulty

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which an individual faces in his program for self-development was not ever faced by the founder of the religion in which that individual happened to be born.

Temperamentally, too, some persons are differently constituted from others. If an individual is familiar only with an emotional evangelical religion, he may find that contact with the representatives of that sort of faith and attendance at that kind of church increase his difficulties rather than resolve them, that is, if he be of a rational turn of mind. If he be of the sort of people who like to do their own thinking, and finds himself, because of family reasons, expected to attend a church where everything is decided for him and he has nothing to do but accept it, he will become a rebel; and, if he does not discover that there are a few churches where one is encouraged to think for oneself even on the most basic matters of religion, he will probably separate himself from religion altogether.

And that is a tragedy, for every man needs a religion, an idealism, an enthusiastic faith.

- Religion is most frequently recommended, especially in times of confusion and upheaval, as a steady force, a stabilizer; and there is a virtue in religion in that respect.

A gyroscope is the best stabilizer because it keeps going round and round in the same old way without getting anywhere, and resists any effort to change that way. It is true that most religions, as ordinarily practiced, are like that, and are therefore model gyroscopic stabilizers. And there are many personalities that need a stabilizing force. For them that sort of reli-

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gion is a good thing, and highly to be recommended. Indeed, it is recommended by psychiatrists.

There are, however, many more people who need just the opposite sort of environment for the proper development of their personalities. They need inspiration and stimulation and the challenge of a great cause to bring out the best in them.

Going round and round in the same old way does not satisfy them. They want to get somewhere. Mechanical revolution in a path of eternal monotonous stability does not soothe them: it irritates them and makes them want to start another sort of revolution, a revolution in the church which shall set it ablaze with the zeal of its early apostles.

The church of Christ was not originally a stabilizing force; it was a most disturbing revolutionary force. The cross was a symbol of a crusade against wrong. It was on the banners of an army of brave fighters for human democratic rights. It led the way of human progress. But today the cross has become reversed and is now used as an anchor.

The man today who wishes to develop his personality will need to find his religious inspiration in either the more liberal and progressive wings of Christianity or in some other religion.

The person who wishes peace, comfort, stability, safety, and rest can find all those qualities in orthodox Christianity, in some of the newer escape-type cults, but best of all in Buddhism, where they have made a speciality of that sort of thing for centuries. A Buddhist priest or a Hindu yogi has a peace that passes the understanding of Christians.

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But the seeker of safety and stability must not expect too much; he must not expect to develop his personality. It is true that he will grow in grace, in amiability, and in all the virtues of the cloister. He will find, though, that he will lack those virtues which come only to those who gain strength of character by meeting their difficulties instead of avoiding them. They temper their steel in the fire. They toughen their oak fibres in the storms. They develop their moral muscle by mortal combat with the evils of the day.

After all, self-development can come only by a courageous facing of all the sorts of environment life has to offer, and the highest development comes to those who incorporate in their own personalities the results of contact with the rough as well as the smooth.

Self-direction can never be learned by standing still or sitting at ease in Zion or resting in the Lord and waiting patiently for Him.

And self-determination, which is the second of the three great qualities of personality, and which includes, as we have seen, both self-direction and self-development, can be achieved only as the individual consciously sets his face toward his Jerusalem, where danger and possible death by torture awaits him.

How can one determine what he shall be? How can he shape his own personality? Only by having first studied himself so that he knows his strengths and his weaknesses, and then by setting forth boldly to eliminate or sublimate the weaknesses and increase and develop the strong points, always keeping to the path which leads to the ideal man he hopes to make of himself.

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Such a one may not always have peace, and he will know more of danger than safety, but great joy will be his, the greatest joy known to man, the joy of knowing that he is building a character, than which nothing is more precious. For a human character, a well-developed creative personality, is the very goal, the richest fruit, the highest product of the whole long process of evolution on this planet.

The thrill and satisfaction of mental and moral growth is his. As he reduces and synthesizes all his impressions from his environment into that ever-enlarging and ever better integrated personality of his, he finds the hitherto unorganized parts of his personality swinging into their proper place and contributing to his further self-development.

Self-determination reaches such a high point in some persons that they actually seem to dominate their environment and dictate to circumstances, to natural forces, and to matter itself what it shall do. They seem to bend their surroundings to their will in an almost miraculous fashion. Time and tide serve them. With an imperial manner they say what shall happen, and lo! it comes to pass. All races and nations have seen such men among them. The ignorant envy them and call it all sheer luck. The religiously credulous call it a miracle and say that a god did it through them. Men of this grand type are, of course, the source of all miracle stories.

Just as the strong man of the tribe, be he Hercules, Samson, Hiawatha, George Washington, or Theodore Roosevelt, is found in later days the focal point round which gathers a cycle of tales of miraculous

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prowess, in like manner, the man strong of spirit, developed in personality, so integrated in all his mental and spiritual parts that he makes unusual things happen, is credited with more than mortal powers.

There are "miracle men" in every trade and business and profession to whom their fellows bow in respectful admiration and whose names are spoken with reverential hush. It is the tribute of less-developed personalities to the unusually developed ones.

But anyone, whether fame be his lot or not, who is willing to invest patient, earnest, faithful work in developing his personality in an intelligent fashion will find thrill enough to repay his efforts. He soon comes to regard it as a most fascinating game. He finds himself the player, the checkerboard, the checkers, the opponent, the game, and finally the victory—or the defeat. It is all within his own personality.

To be sure, his relations with other men have a mighty influence upon him, but he learns to determine how much he will permit them to shape his life. Economic conditions beyond his control may make his lot hard, but they cannot injure his real self. He cannot prevent, perhaps, an economic depression, but he can avoid a psychic one ~~within himself~~.

His environment may be such that no one will expect him to amount to much, and will say contemptuously and incredulously of his early successes, "Can any good come out of Nazareth?" But his personality, by very early and very persistently exercising a selective judgment upon the chance material brought into the inner workshop of his mind, will slowly and surely build up a character, a recognizable identity. Even as

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a child and as a youth, people will begin to say of his acts, "That was just like him."

A character is essentially a distinctive mode of action. By derivation, the word, character, is allied with a seal or signet ring. A strong personality's impression is known when it is seen. His actions are literally characteristic. His deeds are recognizable by others. The really great artist in any line need not sign his work. An idea passes through his mind and comes out from his hands or his lips and somewhere on the way is stamped indelibly with his mark.

The man who is self-determined, who is the master of his environment and not, like the mass of men, a slave of it, is known whenever and wherever he is seen.

CHAPTER SIX

THE PRESENT STAGE OF EVOLUTION

THE EVOLUTION OF HUMAN PERSONALITY

[3] SELF-COMMUNICATION

THERE IS an old, and somewhat outmoded, but still serviceable classification of man's mental equipment into intellect, will, and emotion. These three divisions are unsatisfactory if we consider them as separate and always distinguishable, for they overlap and intersect. But they do represent three phases of man's mental life.

The first mark of personality, self-recognition, is largely an activity of man's intellect, or at least of his intelligence. The second, self-determination, is an activity of his will, however difficult to define scientifically that word, will, may be. The third mark of personality, self-communication, includes within it some action of the intellect and some of the will, but has a larger emotional content. Without sensibility, in the sense of capacity for feeling or emotion, self-communication in any real way could not properly develop.

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Just as we found self-recognition to include self-grasp and self-estimate, and self-determination to include self-direction and self-development, so also does self-communication contain the two phases of self-expression and self-giving.

There can be no hard-and-fast line drawn between the second element of personality, self-determination, and the third, self-communication. The second blends into the third, for self-development can proceed only so far, and not very far at that, before the first phase of self-communication, namely, self-expression, is seen to be a very necessary part of developing oneself.

If self-expression is taken in its wider meaning, even speech is a method of expressing oneself, and speech of a primitive sort must have existed among the very first human beings, as we have seen. But we are here using the word, self-expression, to mean especially the conscious endeavor to create something of artistic value, to express in visible form, color, rhythm, or tone, or in some type of literature the idea or ideal in one's mind.

The desire for self-communication is the source of creative art, and the personality of the artist grows by self-expression. It is also the source of love, and the family is the effect. Those who miss the developing influence of self-communication in family life frequently seek it in some art. One knows only too well that he cannot share his immediate ego with even his closest friend, much as he or the friend may wish it, yet he finds himself growing the more he enters into other life. He increases his personality by giving him-

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self away in creative activities, in work for his loved ones, or in social service for the people of his community.

As Bosanquet puts it in *The Value and Destiny of the Individual*, page 40, "At his minimum he is almost mere exclusiveness and antagonism. At his maximum he is one with the greatest and widest forms of life." It is therefore evident that self-expression is a very essential part of self-development, so much so that it may be truly said that refusal to express oneself is equivalent to stopping personality growth.

There is a subtle interplay between the inner life of man and the visible expression of it in creative activity. The sculptor chisels a beautiful bit of statuary and soon discovers that his own creation has had a noticeable effect on his own personality.

We are created by our creations. Life has no greater lesson for us than that.

For when a man conceives an ideal, when he imagines a thing of beauty, even as he thinks of it in his first thrill of discovery, it has already begun to influence him. If he has any creative urge worth mentioning, he will not rest until he has brought that beautiful thing into being, or has discovered its creation to be impossible, or has had a second vision of something even more beautiful which supersedes the former.

And as he works patiently to give body to his dream, through years of labor perhaps, it is always beckoning him on, and his consuming passion for that beautiful thing burns out the dross of lesser things. As the knights of old sometimes flung their helmets

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forward into the press of their enemies and then fought desperately to recover them, so the artist ever projects before him his ideal and works toward it.

The very struggle to embody the somewhat vague conception in his mind not only defines his idea more sharply but also strengthens his personality. It is easier thereafter for him to create an even better thing, for he has established a precedent in his brain and has shaped himself as he shaped the clay of his model.

In a certain sense, the thing he has created is part of himself. It was part of him when he thought of it, and it is still of his very essence now that it is embodied. He has projected and extended his own personal being.

The statue he has made is chiseled out of marble, but it is also carved from his brain stuff. The virtue of the marble is that it is enduring and will last after he has died. In that way a part of him has become immortal. He has transferred a beautiful part of his personality to a less perishable piece of material. If immortality be the continuation of personality after bodily death, then all great artists achieve immortality. And if someone objects that this cannot be real immortality, for the artist himself does not live after he is dead, the question arises as to what the artist himself consists of. Surely the most valuable, the eternal part of him, his spirit in one sense of the word at least, still survives. But more of that later.

The point that we are dwelling on because of its importance to our thesis, and, indeed, to all human-

kind, is that expressional activity is essential to personality development.

The evolution of human personality may be expected to be accelerated in the next few generations, if only for the reason that the possibilities for self-expression have lately been greatly increased. Of course, standardization and the industrial age generally have temporarily retarded some forms of self-expression, but the industrial world is now undergoing a very great change, the extent and character of which is not yet fully evident. But it is obvious that whatever other changes occur, it is inevitable that the shorter workday and workweek are here to stay. The consequent increase of leisure will give much greater opportunities for self-expressional activities to a vast number of people.

That is not to say that they will all make good use of those opportunities, but some of them will, and, if our educational system is properly revised, a large number of them will. The education of the future, of the near future, must accept the challenge of this situation by doing well three things which it has been doing very poorly, if at all. And it can do those three things because they have been done by a few wise and visionary teachers in the past.

The three tasks of the teacher who would prepare his pupils to take advantage of the opportunity afforded for personality development through self-expression by the intelligent use of the coming increase of leisure are these:

First, the teacher must wake in the pupil the consciousness that he can express himself beautifully and

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satisfactorily in some one way or another. The greatest difficulty to be overcome is the false and cowardly sense of inability. This feeling of incompetency for self-expression is a product of the erroneous and widespread idea, inherited from our busy, pioneer, ground-breaking and tree-chopping forefathers, that an artist is a sort of freak who is too lazy to work and uses art as an excuse for avoiding real labor. By artist we mean not only the painter and sculptor, but musician, play-actor, and dancer as well.

Anyone familiar with the history of our schools and colleges knows that it is only recently that music, dancing, acting, modeling, painting, and drawing have been included in the curricula. Even yet they are found in comparatively few institutions of learning; and, where they are included, they occupy a subordinate place. Their great educational value is still to be recognized.

Now the sense of inability and incompetency which many pupils have when they are confronted with the suggestion to take up art in any form is due to our national inherited feeling that art is a sort of freakish thing and one is only justified in pursuing it if he has a special gift or aptitude for it and can do it rather well naturally.

There is no denying, of course, that artistic expression comes easier for some than for others, but it is not true that artists are born and not made. Even the apt must put in hard work to become proficient. A genius is usually a person who has recognized his possibilities and has developed them.

It will be wise for the teacher who would arouse

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the pupil to the possibilities of expressing himself to point out that it is not necessary to produce a masterpiece in order to derive great benefit from the pursuit of art. The most valuable result of the study and practice of music and painting is to be found in the pupils and not in the art galleries. Personality is more important than pictures. It is worth while to paint and sing and dance and act and model even if one hasn't the slightest chance of ever becoming a Rubens, a Caruso, a Pavlova, an Irving, or a Rodin.

There is a satisfaction and an educational value to be had from the drawing of simple objects, the composing, singing, or playing of music that is not complicated, the creation of a dance of a few movements, the shaping of a bit of clay to express a single idea, or the writing of a piece of prose or poetry which shows neither great learning nor an ability to arouse a nation.

One or more of these things any child or adult can do, if he but dares to overcome embarrassment and let his personality express itself simply, naturally, and originally. It is the first task of the teacher to rouse the pupil to the realization of the possibility of artistic expression.

The second step is to teach the value and importance of such expression. Once the student is impressed with the possibility of his doing any of these things, it is not hard for the teacher to get him to try; and once he tries, he will himself discover that it is worth while. For the results will soon be evident to him. He will gain confidence in himself, and that alone is of great value. But the teacher can do more.

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He can point out from the lives of artists of various kinds how they grew as they learned to create. He can also, and this is of more importance, indicate to the pupil when the latter has finished a piece of work that the really valuable product of the effort is not on the canvas but in the pupil's own personality.

To create anything, one must first imagine it. The imagination, once stimulated, will keep on suggesting other creations, the greatest of which, if the process be permitted to continue, will be the creative personality of the artist himself.

The third duty of the teacher is of comparatively less importance, although it is usually placed first: the task of teaching methods. But the methods must include more than teaching the proper position, the correct use of materials, and the technique of the subject. The effect of method on the artist is of major importance. The attitude of the pupil as he sits at his work is not a matter merely of the position of his shoulders, arms, and hands. It is his mental attitude toward his work that counts most. A few advanced thinkers among the teachers are already recognizing that all the technique in the world will not bring the desired results either in the product or the artist if enthusiasm, willingness to labor patiently to secure the right effect, and a keen appreciation of what it is all about, in short, if the creative spirit is absent.

The world is richer for the artist today than it ever was before. New abilities are in the process of arriving. New receptiveness is appearing in the audiences and in those who will see his work.

Growth in the ability to appreciate beautiful

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things has proceeded rapidly of late. It is not very long since the world was colorblind and harmony-deaf, as well as deficient in the ability to distinguish perfumes.

Colorblindness and the inability to appreciate music and the great variety of perfumes are still often met with, and those who have these senses developed pity those who have not. But it was once the man who had these senses who was unusual. Until comparatively late in the history of mankind, men were unable to enjoy the sensations which are now common to most civilized men.

From the study of ancient languages and the literature written in them it appears that only a few thousand years ago men were blind to half the colors we now know. Max Müller called attention to the significant fact that there is no Sanskrit root referring to color, and a similar absence of color-names has been noticed in other primitive languages.

Müller also showed that the recognition of color was defective even as late as the fifth and fourth centuries B.C. among the Greeks. He wrote, in *The Science of Thought*, Volume I, page 299: "It is well-known that the distinction of color is of late date; that Xenophanes knew of three colors of the rainbow only, purple, red, and yellow; that even Aristotle spoke of the tricolored rainbow; and that Democritus knew of no more than four colors, black, white, red, and yellow."

Dr. Richard Maurice Bucke, who quotes this passage of Max Müller's, emphasizes the lack of references to colors in ancient religious texts, and links that

fact up with evidence drawn from etymology, writing, in *Cosmic Consciousness*, page 29, “. . . were it possible to believe that all the poets of the Rig Veda, Zend Avesta, Iliad, Odyssey and Bible could have omitted the mention of the blue color of the sky by mere accident, etymology would step in and assure us that four thousand years ago, or, perhaps, three, blue was unknown, for at that time the subsequent names for blue were all merged in the names for black.”

When men first began to distinguish colors, they knew only red and black. “Under the name red it seems they included with that color white, yellow and all the intermediate tints; while under the name black they seem to have included all shades of blue and green.” Then they learned to tell red from yellow and black from green. After a time they were able to detect white, and then blue.

The distinction of yellow from orange is very recent, and it is still difficult for many persons to tell yellow from white, especially in artificial light. Many living today were taught in their youth that the colors of the spectrum are red, orange, yellow, green, blue, and violet. It is only in the present twentieth century that it has become a matter of common knowledge that there is a distinct color, ultramarine indigo, between blue and violet.

Science has lately been able to measure the wavelengths of the light coming from the various colors. It is a delicate process and the unit of measurement is a thousandth of a millimeter, but the scale thus estab-

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lished is of great assistance to those who have to do with colors in art and industry.

Distinctions between colors are not confined to those of the spectrum, for of recent years the human faculty for detecting color has become so developed that literally thousands of shades of color have been identified and given distinctive names.

That practice in color-distinction really does develop the ability is shown by the interesting fact that women have much less colorblindness than men. Because of their greater interest in dress and fabrics, women have trained their eyes to fine discrimination in colors. The result is shown in the fact that only one woman in four hundred is colorblind, whereas one man in twenty-five has that defect.

Other indications of the recent arrival in human beings of the color sense are the fact that it is late in appearing in the individual and very rare in our dreams. Children are not able to distinguish colors at birth. Red is the first one they learn to notice, and they are several years old before they know all in the spectrum. Scientists have found that the later in racial history a sense has developed, the less frequent is its appearance in dreams. It is therefore of significance that color seldom is registered in our dream-consciousness; and when it is, it is usually the wrong color for the object seen.

We are at present, then, at a period when we can actually observe the evidence of the evolution of human personality. Mankind is rapidly developing his color sense, and that fact means a great deal: it means that greater self-expression is possible, for the addition

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of any new ability in man is not only itself an evidence of personality growth but also makes possible an acceleration of evolution in some other direction. Science, in the realm of physics, which is itself an extension of man's mental powers, has made possible a finer discrimination in colors, and that has extended man's opportunities for self-expression in art, which, in turn, will make for his further growth.

It is interesting in this very connection to note that the whole history of art has been changed by what might be called the discovery of color. In the modern development of painting, color has superseded line, which the classicists were forced to emphasize because neither they nor those who admired their paintings had as fine a color sense as has since developed. The impressionistic school, with its new tints and shades, could not possibly have flourished in early times, and even today there are many whose sense of color is so poorly developed that they cannot appreciate impressionistic art. Color was somewhat known of old, of course. The Greek and Egyptian artists and even the Cro-Magnon painters used it in their cave murals, but form and line, light and shade, are the principal emphases in the older art, and it has remained for the moderns to bring color forward and develop its infinite possibilities.

An even later development of vast assistance to man in his search for new means of self-expression is the discovery of music. Primitive music existed a long time ago, but it was exceedingly primitive and would not be called music at all by modern men. The orchestras mentioned in the Bible—David's and Neb-

uchadnezzar's—would drive us insane if we were obliged to listen often to them.

And music remained primitive up to very recent times. It seems incredible that such a fundamental thing in musical composition as harmony should not have been discovered long ago. It was Bach, in the eighteenth century, who really created harmony in music, and he was not at all understood by his contemporaries. It is since his day that men have learned to appreciate harmony. It was as late as the nineteenth century before the great masters of harmony arrived.

Half, at least, of the men of the world are still music-deaf, and the number of those who can really appreciate the best music is very small indeed. But it is growing, and the future will witness a tremendous advance in the use of music as a means of self-expression. In 1901, when Dr. Bucke first published his *Cosmic Consciousness*, he set the age at which musical consciousness appeared in the individual as eighteen years, but in the half century since that time, it is recognizable that the age of the arrival of the music sense has been appreciably lowered. There are plenty of boys and girls in their early teens and even younger who have a fine ability to appreciate music today. The recent rapid spread of high-school and junior high-school orchestras has revealed a latent capacity for musical expression among those hitherto supposed to be unable to distinguish between good and bad music. And the phonograph and the radio, while they have released a flood of cheap and undesirable music, have also brought a knowledge of

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and a delight in really great music to many thousands whose lives were heretofore deprived of that cultural influence.

There are those who think that painting and music comprise the whole domain of art and, since they despair of ever becoming able to express themselves in those realms, decide that self-expression is something they must forego. But the vast and varied fields of sculpture, interpretative dancing, the theatre, and literature all afford endless opportunities. The person who is really convinced of the importance of finding a satisfactory method of self-expression will find his field, even if he has to make several preliminary experiments. And he may discover that he needs several differing methods to bring out all his qualities. It is in fact advisable that he try his hand at all of these means of self-expression at some time or another in his life. He will discover that some art which he least expected would be of interest to him affords untold joy in creational and expressional activities.

The various arts are like different languages. Just as the languages force him to stretch his mind and to develop new association centers in order to comprehend new idioms and thought-forms, so also will the various arts compel him to make new accommodations in his brain for the handling of the different problems and experiences which come to him.

A man's personality deepens and expands in proportion to the number and variety of experiences and problems which he meets intelligently and solves satisfactorily. The attempt to bring these various ex-

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periences into line with those previously undergone requires the development of a high type of intelligence. To reduce all these impressions to a unity necessarily expands that unity, which is, of course, one's own personality. Dr. George Cross, an eminent Baptist theologian, once said, "A strong personality is one who has focussed many modes of purposing, thinking and willing in his own life."

The field of sculpture offers greater opportunities for self-expression than almost any other, and it is singularly neglected. It is far older than music or painting and has a noble history. It is an especially attractive field for mature persons who are seeking a new field for self-culture. For success in sculpturing seems to require a mature mind. One must have lived much and thought much about life to be in possession of a self worth expressing in eternal marble, or even in enduring wood. There is something universal, epic, and even racial about a sculptural masterpiece. It always expresses a great soul who has somehow seen into the center of things, learned the eternal verities, scorned the temporal and accidental, and concentrated upon the greatest products of human experience.

A peculiar joy there is in molding clay or carving wood, a racial thrill that goes back to the time when man first discovered tools and trained himself to use them successfully. Then to put in enduring form the best one has in him, to reach down not only into individual experience but even into the racial substrata and bring up into the light and give form to what all men dimly feel, is to attain a deep and satisfying joy.

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Dancing is older than sculpture, even, and goes back to the very first men, then back through the animals to some of the most primitive forms of life. It repeats the mighty pulsations and rhythmic waves of that primeval sea on whose shores and in whose shallows life probably originated. The millions of years when we were fishes and felt the ebb and flow of the tides, the countless years when tree ancestors of ours swayed in the breezes or leaped from bough to bough, yes, even the steady pulsations of our mothers' heartbeats in the long months before we were born—all these cry out in us for release in the dance. The best dance music is subtly suggestive of all these racial rhythms, and, when it calls to us, we are wise if we answer. Dancing makes us one with all life again, and we are healed of our eccentricities and overcivilized restraints.

Nudism at its best is merely an extension of the benefits of dancing. It restores our ancient heritage of light and life and fresh air and free unimpeded motion. The first thing noticeable in the conduct of a child freed of his clothes is his desire to dance and leap about. It is hard to remove the last garment, as every nurse knows, because the little body is already wriggling with the first motions of its dance of freedom.

Expressional dancing has the virtue that it calls the whole body into the service of self-expression. Whirls, postures, bends, steps, leapings, and rhythmic repetitions of varied movements call every muscle into play.

In a dance studio in New York where a group of

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adolescent girls were practicing, they heard the drone of the motors of a formation of airplanes passing over the city. Immediately, and without any suggestion from their teacher, they created and worked out into beautiful symbolism "The Dance of the Airplanes." Those of us who have been privileged to witness their creation have had a memorable experience. It is a new thing come upon earth, a beautiful and eternal thing, the translation into the motion of expressive young bodies of the triumph of man's conquest of the air.

Thus did these girls spontaneously and joyfully appropriate unto themselves a great victory of man over his environment. It is in such ways that self-expression assists us in self-development, and also allows us to contribute to the number of beautiful art-forms in the world. Some day, and let it be soon for the sake of our children and of our national and racial future, we shall have expressional dancing as an integral part of the curricula of our schools.

The theatre is suffering parlous days, but it is bound to come into its own again, for it is one of the mediums of expression which men cannot do without. Any great play, whether it be opera, tragedy, or comedy, is great because great actors interpret typical human experience and re-create before our eyes and in our hearing the conflict of man with man, sex with sex, and man with his environment. It is a field for self-expression offering hard work but rich rewards in personality growth. From the point of view of expressional values, the so-called little theatre movement and the increase of amateur theatricals is of

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more significance than the professional and commercial theatre. The greatest benefits from the theatre are for those who act, but there are opportunities for lessons in self-improvement to be had by the intelligent theatre-goer, if he selects his plays carefully and attends good plays more than once each.

Allied to the stage although often belligerent toward it is the pulpit, which is suffering even more parlous days. The numbers are limited, of course, of those who can benefit by having this avenue of self-expression, but a man with a real message who desires to communicate it to his fellows can at least set up a soapbox in a park and will attract his own audience. And public speaking may have many other subjects than religion.

When it is taken up seriously under a thoroughly trained and experienced teacher, there is no better method of self-expression than giving one's thoughts to others through the voice. Yet oratory and elocution were already passing out when the radio gave them their deathblow. A new technique must be developed when one's hearers can no longer see him. A speaker whose audience can see him communicates much to them through his eyes, facial expression, and bodily attitude.

Television to some extent restores this advantage to the speaker, although he still misses seeing, hearing, and feeling the immediate audience reaction. There is nothing as yet in radio or television which can match the situation when a talented extemporaneous speaker appears in person before a church or hall full of people and with the help of their attention,

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interest, and sympathy produces a great inspiring utterance. He and they feel the thrill of creative consciousness.

Meanwhile the great radio audiences are a challenge to a speaker to show what can be done by the voice alone to influence his unseen hearers.

Whether one's audience can be seen or not, the speaker who is impressed with the importance of his vocation will find that the pulpit, platform, rostrum, or microphone calls him to put forth the best that is in him, and that, as the months and years pass, his self-expression has educated him and strengthened him as a man. Why women, with very few exceptions, make such poor public speakers when they are naturally so much better conversationalists than men, has never yet been satisfactorily explained, but it is a fact, and that field of self-expression is practically closed to women except for the stage. It may be that women's rise in politics will impel them to overcome their natural difficulties in this profession, but as yet there are hundreds of good female lobbyists to one good lady-speaker.

The field of literature, however, is opening to women. They are not particularly expert in the non-fiction field, except that a few excel in the gossipy sort of biography, but in novel-writing and short-story composition as well as in poetry they are rapidly coming to the front. Women essayists and historians are few, but since they are already rivaling the men in the informative type of magazine article and have done some excellent historical novels, they may yet do essays and histories.

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The value of literature as a means of self-expression needs no great emphasis. It is the field to which thousands have turned of late, including many who should have chosen some other mode of self-communication. To write good poetry or prose is not easy. Years of patient application and intelligent self-criticism are necessary, but the most important requisite is thoughtful reaction to one's own experience, and the experience must have been wide. Those persons are most likely to succeed in literature who have tried and succeeded in some other field first. Then they may have something to say, and then, too, their experience in mastering one method of expression will stand them in good stead in achieving another. Even then, however, the mere technique of writing any kind of literature is difficult.

But if a person is content to write without demanding the publication of his work, he may find some real satisfaction in merely expressing himself in written words. The very process, even when poorly done, forces him to order and develop his thoughts. And if, after many trials, he succeeds in writing something that honestly seems satisfactory to himself, he may then dare to present it to the public. When he has done something really good, however, he will find that he gets a hundredfold more benefit out of the book himself than any of his readers. He has added the book to himself; it is an extension of his own personality.

There are, of course, a dozen other methods of self-expression besides those we have named. Architecture, engineering, designing of a hundred different

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sorts, business (when the businessman has a vision of service), politics, law, medicine—the professions and vocations of men are many. They all have values for the man seeking self-expression; but, to extract those values, the individual must consciously use them for self-development in a high and holy way. When any business or trade or profession becomes merely a way of getting an income, then unless it can be transformed into a means of self-communication, the man, to save his soul, must seek an avocation which will permit him to build up his inner self through joyfully expressing it.

One field we have purposely left till the last, the field of religion, because it is somewhat different. Religion has been for so many people a means of self-repression that to treat it as self-expression will seem to some to be out of order.

Yet religion has been an expressional activity of men from earliest times. If that aspect has been temporarily obscured and religion has served, whether for good or ill, as a means of repressing man's spirit, the repression has been but for a period, and the pent-up desire for expressing one's inner life in the field which seemed most important of all has burst forth in a renaissance of power and beauty.

Religion in its purity is such an exciting and compelling thing that the man who feels its call must needs express himself in and through it. To be simply one of an audience which does nothing but listen to a man who does nothing but talk is not sufficient. That is a mere travesty on religion. If a man has really got it, he wants to do something about it. A type of re-

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ligion which gives a man something to do, even if it is only to genuflect, rise and sit at stated periods, join in prayers and responses, and sing occasionally, is a little bit helpful. But much more acceptable would be a form of religion where a man has something to say about what should be done and how, where he can determine at least in part how he shall express his religion.

There was real expressional value in the old-fashioned prayer and testimony meeting, where each person present felt free to make a little speech, pray a little prayer, or lead a hymn in which the others joined.

But religion is, after all, not a matter of meetings or rituals of any sort. Religion is the endeavor of divided and incomplete human personality to attain unity and completion, usually but not necessarily by seeking the help of an ideally complete divine person or persons. And therefore religion includes all of life, properly, as once indeed it did, when all of life was religious and there was therefore no need for the word, religion. It does not occur once in the Old Testament.

We cannot nor do we wish to return to the time when art was confined to carving fetishes or images of the god, when drama was but a part of a religious ritual, when law was simply the will of the gods, when morals were religious tabus, when literature was limited to religious books, and when every action of life was determined by religious sanctions.

But it would be most refreshing for us and for religion too if it could be recognized and defined and

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practiced as simply the effort to synthesize all life into a splendid, integrated, purposeful whole. The most important thing in all the universe, so far as we are able to discover, is human personality. For it all the ages before us labored. Man is the chief product of evolution. Since he is conscious and able to think and plan and act creatively, since he has self-recognition and self-direction in a way no other animal has, evolution must go on through him. He is far from perfect, so evolution must go on in him. His improvement, both for his own sake and the sake of the rest of things, must be his chief concern.

If, then, man's self-improvement is the most important thing he knows, and if self-expression is one of the most successful methods he knows for his own self-development, then is not any self-expressional activity religious?

Or to put it theistically, assuming that there is a God, surely He must reckon the improvement of man of vastly more importance than the worship of Himself, or He is less than man, for the best men repudiate anything resembling worship or adoration. Worship cannot add anything to such a Being as God: its chief value is that some men benefit by worshipping an ideal Being, for it focuses their attention on goodness which they desire to incorporate in their own personalities. They want to be perfect as their Father in Heaven is perfect. Very well, then, self-improvement is their chief religious duty, and any form of self-expression conducive to that end is most obviously religious.

But religion itself is but a means to an end, the improvement of man. It fails if it does not further that

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purpose. When religion is made an end in itself, it becomes sterile and dead. When we make a religion of the self-improvement of man, we save it and man by saving it for man.

There is another side to self-communication besides self-expression. The other side of the same shield is self-contribution or self-giving. The inner aspect of self-communication is self-expression; the outer is self-giving. In self-expression the object is benefit to oneself; in self-giving the object is benefit to others. The separation between the two is merely for convenience in discussion; really the two overlap, for self-expression benefits others as well as the one doing the expressing, and self-giving is of great value to the giver as well as to those receiving.

Too sharp a line has habitually been drawn between self-interest and altruism. Neither can exist without the other. If a person overemphasizes either, he loses more than he gains and fails of his object. He who develops self-interest to the point of selfishness, which is seeking the benefit of self to the detriment of other folk, finds that the very self he is trying to develop is not growing, but shrinking. He who is overaltruistic to the point of neglecting his own private interests will eventually become a burden on society and thus defeat his original altruistic purpose.

As far as we can determine, altruism began in family life, probably in caring for offspring, and therefore had its roots in prehuman times. But conscious deliberate protection of the child and the mate began to develop rather rapidly when the human family was established. It may be said, then, in a gen-

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eral way, that altruism grew out of self-expression through sex.

Sex is the link between self-expression and self-giving. All our social institutions derive from the instinct for reproduction or from its concomitants and consequents. The history of the evolution of sex relations from the physical coupling of animals to the most beautifully ideal relationship between man and woman today is paralleled by the rise of social institutions and the growth of the altruistic spirit, and the latter are, directly or indirectly, the result of the former.

When the attainment of the erect posture was made possible by the evolution of the hindlimbs into feet and the forelimbs into hands, a revolution in sex relations took place. The kiss, the embrace, and affectionate arm-in-arm walking were possible. Now that mates could see each other face to face, the eye became a means of expressing interest and regard. The development of the sense of touch as the fingers and hands grew more sensitive made the holding of hands by members of opposite sexes a new and pleasurable sensation. As speech developed, verbal exchanges of expressions of affection heightened the pleasure of being in the vicinity of the mate.

In other words, courtship was developing subtle overtones. Love was evolving. The brief pleasure of the early act of love was gradually lengthened as the variety of methods of approach and preliminary demonstrations of affection increased. New words were invented to express the feelings of the lover and his admiration of the object of his love. Love songs were

composed. A ritual was developed which must be faithfully followed before the love act, and thus ceremonies of marriage arose. A whole culture was inspired by man's desire for woman and woman's for man. The family came to be and evolved from polygamy to monogamy.

With very little exaggeration it could be stated that civilization itself grew out of the overtones, nuances, accompaniments, and developments of sexual relations. Even religion owes to sex much more than it realizes. And there is much of good yet to come to humanity from the future spiritualization and sublimation of the sex instinct.

Sex was at first selfish, and still is selfish among the less developed of mankind. But it taught man altruism as it evolved into something finer than ruthless self-seeking pleasure. As men and women grew in refinement and culture, they became more desirable to each other and their pleasure in each other's company grew more intense, not merely in their more intimate moments but also in their periods of association and companionship.

The lover was impelled to do prodigies of valor in order to win the esteem and favors of the beloved, and as women grew more refined the character of the accomplishments which they appreciated in their heroes changed from mere physical prowess to cleverness in handwork. He who could make beautiful tools, dishes, and ornaments might win a fairer maid than he who killed the most game or the greater number of tribal enemies. The sweetest singer would win women to share his hut. The man who accumulated property

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would find plenty of fair ones willing to live an easier life with him.

When woman's own altruistic sense grew great enough through her increasing unselfishness toward her children, she came to appreciate the nobility of altruism in men. Man's growth in character has had no greater stimulus than the desired approbation of the good women of the tribe. And his love for his mate and their offspring taught him to subordinate his own selfish desires that his family might be happier.

Thus altruism is an outflowing of the originally selfish sex urge and the desire for self-expression through sex.

Similarly religion, which had a selfish origin in the desire to secure advantages by placating and pleasing the supernatural powers, has evolved to the point where it affords one of the main inspirations to altruistic self-giving. As the idea of God improved with man's own rise in culture, God changed from a selfish, jealous demander of strict obedience and groveling worship to a kind, unselfish, loving Heavenly Father. Man really came to love his God. Then when religious prophets began to say that he truly loves God who loves his own neighbor, the whole force of religion swung into play to educate man in altruism.

Surprising results came when man once learned to give of his interest, his time, his talents, and his money for the benefit of others. He found, unexpectedly, that he not only had great personal satisfaction in relieving the wants and improving the condition of others, but that he also grew in personality. The gifts he gave returned a hundredfold in the element of

strength which the virtue of generosity added to his own character. It was a great day in the history of the human race, a great triumph for mind and spirit over matter and the flesh, as it seemed to him, when a man could say and mean it, and receive nods of assent from even a dozen hearers, that "it is more blessed to give than to receive."

The evolution of personality, however, suffered a severe setback when the idea arose among some religious folk that occasional gifts to others permitted one to indulge in a generally selfish life; that charity covered, excused, atoned for, a multitude of sins. When charity is deliberately exercised to secure personal benefit for the giver, it entirely loses its altruistic character and becomes one of the meanest forms of selfishness.

Moreover, a charity exercised not for atonement for one's sins, but for the pleasurable sensation of having done a kindness, falls in the same category. A coin tossed into a beggar's hat was once deemed a religious act; it is now a serious sociological error. It merely confirms the beggar in his habit of begging. The real self-giver would find the beggar a job, or at least demand a return of some sort. If you take the exhibited pencil or package of chewing gum, you may surprise the mendicant, but you will make him a merchant and increase his self-respect. If you leave the offered merchandise, you may have a feeling of additional virtue, but you are really hurting him, society, and yourself.

Self-giving is an art, and requires intelligence and a sense of social responsibility. With the best gifts,

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something of the personality of the giver is included. When even the sentiment which goes along with the Christmas gift has been stated, printed, and illustrated by someone else and only purchased by the giver, the recipient should feel insulted, but he usually does not, for he has followed the same miserable and miserly method. Better a bit of brown wrapping paper inscribed in pencil with an original heart-felt greeting than the most elaborate and expensive card. "The gift without the giver is bare." He who sends a printed card with or as a Christmas, Easter, or anniversary remembrance is guilty of what should be regarded as a social error and has missed a fine opportunity for self-expression and self-giving.

The best self-giving waits for and depends upon a developed sense of social responsibility. Being a Good Samaritan is not enough. What the world needs is Better Samaritans who will not only attend to the immediate needs of the suffering, but will also cooperate for the policing of the Jericho road and will work for a better social system than the one which forces men to become robbers in order to feed their own families. If we are content to be merely Good Samaritans, the poor we shall truly always have with us.

He develops his own personality and builds up a better world who expresses through every art channel possible the beautiful ideals in his mind and who gives himself freely to others in a truly altruistic spirit. He will even suffer severe discomfort, hardship, and pain for the sake of others. The mother, the pastor, the good citizen, all subordinate self even to the

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point of deprivation or death itself in the interest of the family, the parish, and the community.

The socially responsible person faces all decisions in the light of the needs of his social group, and not only refrains from eating the meat which might cause his brother to stumble, or prices to stay high, but uses for the positive betterment of his brother the money which the meat would have cost.

The deprivations and suffering which may come to him he does not consider valuable in themselves, and he has no delusions about the alleged magic of self-mortification and asceticism.

Religion, borrowing from its own primitive terminology of the days when the shed blood of the slain was thought to have magical efficacy in itself, is apt to make the mistake of identifying self-giving with self-sacrifice. Our recognition of the comparative values of a better world and our own lives may lead us to sacrifice ourselves that others may profit thereby. That is, we may be willing to offer our bodies for experiments which may lead to discoveries of benefit to all men after we have gone. Or we may have such a sense of social responsibility and be so convinced of the necessity of self-giving that we will work long hours at a difficult social post to the detriment of our health and even to the danger of our lives. But such cases will not often occur because the growth of civilization is making them unnecessary.

We are coming to define self-giving in terms of social service rather than self-sacrifice. We do not consider it vicarious suffering, for the suffering is incidental and accomplishes no end in itself.

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It is true that our pain may excite interest, then shame, and finally repentant ameliorative measures in and by the society for which we are giving our unselfish and painful service. But it is questionable whether such methods are justifiable. It is a nice point in ethics whether or not it is right to inflict self-suffering to call attention to social evil. Some parents punish themselves instead of the child and force him to look on, as if to say, "See how I am suffering in order to make you better." Transferred suffering seldom benefits either the original wrong-doer or the vicarious sufferer. There is usually a better way of punishing children or of calling the attention of society to a social evil. Martyrs are outmoded.

There may be and there frequently is salvation by social service without any suffering, vicarious or otherwise. Indeed, the saving social worker, the intelligent self-giver, ought to be of a happy mien rather than of a doleful countenance. Long faces are no longer a badge of piety and good works.

Remission of social sins is not to be accomplished by the shedding of blood. More and more we are realizing that bloodshed is a sign of a social blunder somewhere. Instead of being part of a divine plan of redemption it is recognized as an evidence of either clumsiness or ignorance. Once surgeons bled men for almost any ill, but today the skilful surgeon takes pride in performing major abdominal operations with the loss to the patient of less than a teaspoonful of blood.

The martyr walking on spikes which he himself has placed may be a saint in India, but he is a fool and

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a social nuisance in America. If, in the course of duty, suffering comes to a modern self-giver, he has no martyr complex over it; he has no delusions about expiating by pain for another's sins. He will willingly suffer, however, that another or many others may not have to, or perhaps, to expedite the coming of some great social improvement. But he will not brag about it. His devotion may not be so spectacular but it will be more effective.

Of the three elements of personality, then, we have found the primary one, the one prerequisite to all the others, to be self-recognition. Until a consciousness of self, including self-grasp and self-estimate, arises, there is no man. The second element, the central power, progressive and yet unifying, is self-determination, with its branches, self-direction and self-development. The third and culminating one is self-communication, including self-expression and self-giving. It depends upon the other two, but intensifies and fuses them both. Rarely are the three equally developed. Only unusual souls attain to personalities that are coordinately evolved and well-balanced and integrated. No person has yet lived who may be said to have been completely cognizant of himself, always self-determining, forever self-giving.

The evolution of human personality is not yet complete. Even the best and greatest of men recognize in themselves more possibilities than accomplishments. The most of us are only partly personal. The men of the rear guard of the march of mankind rise only occasionally above the animal level. But the trail

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has led upward, not always directly, and usually by zigzags with many disheartening retreats.

It takes the long look to give us courage. To us today's conditions seem in many respects deplorable, but to men who lived but a few centuries ago our lives would seem incredibly rich and our powers miraculous.

And another great advance is almost in sight.

CHAPTER SEVEN

THE FOURTH CRISIS OF EVOLUTION

THE APPEARANCE OF COSMIC CONSCIOUSNESS

EVERY CRISIS in evolution must have been heralded by faint dawn-streaks of the sunrise to come, and recently the first foreglows of a new era in the life of man have begun to appear.

Before matter took on life in an organism equipped to sustain itself long enough to reproduce its kind and start the chain of the evolution of living forms, there must have been many chemical combinations which almost achieved viability, many which were able to make a brief movement, but whose first motion was their death-throe. Others lived long enough to appropriate a bit of food and then died. Probably the conditions which produced the first form of life which persisted produced millions of other tiny forms which for one reason or another could not adapt themselves to the environment. It may have been thousands of years before any became viable, even after countless anticipatory forms had appeared. We can legitimately infer that such was the case because

The Appearance of Cosmic Consciousness

of nature's prodigality of production of the lowest forms of life which still exist.

Likewise, when the second crisis of evolution was approaching, namely, the arrival of consciousness, it was long foretold by the advent and growth of instinct, which, in its most evolved forms, is hard to distinguish from reason. Had there been any intelligent men on earth at that time, they could have surmised that consciousness was on the way.

The third crisis, also, was anticipated in many ways. Self-consciousness cast its brightness before it. Signs and symbols antedated writing, and grunts and cries came before speech. The higher simians make sounds which convey meaning to their kind and to us. Man was almost man long before he was really a self-recognizing human being. The child gives numerous signs of approaching self-consciousness for months before he can really be said to have attained personality and to know himself as a self-controlling separate being.

We are therefore justified in assuming that the fourth crisis in evolution is approaching if we see signs that there have recently appeared among us men who are as far advanced beyond the first self-conscious beings as the latter were beyond the first conscious animals, or these beyond the first living organisms.

Each stage in evolution of the three we have noted has been marked by the appearance of a new type of consciousness, a new type of life, in fact, but with close relations to the precedent form and growing out of it.

Mind, in a strict sense, exists only in man, but

mind, in a general sense, is, as we have noted, continuous with life, for all life exhibits what might be called a somewhat intelligent adaptation to environment. And every improved form of life is simply a better method of adaptation to environment, until man appears and begins the long process of adapting the environment to himself.

It is a new type of mind, or consciousness, then, for which we must look if we would discover among us representatives of the great Next-Man or Superman. We need a new word for him, for we do not call ourselves Superanimals. But then, neither did the animals call themselves animals. Will they then, these greater men-to-be, have a new name for us, as we have named the predecessors of ourselves? It is not idle to speculate about the proper name for this new being, for it is by naming new objects, or by trying to name them, that we are forced to study them that we may name them aright.

As a matter of fact, the few men of the fourth crisis who have already appeared have been given descriptive names by those who knew them, very complimentary and even adulatory titles, such as The Enlightened One, The Praised One, The Anointed One, The Deliverer, and the like. Men also called them Lord, Master, and Teacher, for they felt like servants and ignorant children compared with these higher and wiser beings.

For Buddha means enlightened one; Muhammad, praised one; Christ, anointed one; and Moses, the deliverer. All these names were given them after they had reached manhood and not until their sin-

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gular qualities had become manifest. Before that, Buddha had been called Siddhartha, of the Sakya tribe and the Gautama clan. Muhammad's original name was probably Kutam. Christ was known to his family as Joshua or Jehoshua, which was later Hellenized to Jesus by his biographers. What Moses was called before he delivered his countrymen we do not know.

The names given these men by their disciples are very significant, for they reveal the wonder, surprise, and adoration with which they were regarded by those who recognized their superiority to other men. So convinced did the later followers of Jesus the Christ and Gautama Siddhartha the Buddha become of the gulf between these men and ordinary human beings that they called them gods.

But they were not gods. Nor were they ordinary men. Something there was about them which set them apart from even the great men of their day. There was a difference in degree so great as to amount to a difference in kind; so, at least, many of the men who knew them best asserted.

In what did that difference consist? What common element was there in their personalities, what experience had they all had, these men who were called gods and those others, not all deified, but who were recognized as being so different that religions grew up based on their lives and teachings?

The simple answer is that they all had had a certain mystic experience, every one of almost the identical pattern with the rest. An outline of that mystic experience can be drawn which will fit them all in

their essential details in a most surprising coincidence.

Moreover, and of more importance, the result of that mystic experience in every case was the attainment of a state of mind, an attitude toward life, their fellows, and their environment, which can be best described by calling it cosmic consciousness.

Not all the men of whom we have record entered as deeply into the experience as did Jesus the Anointed and Gautama Siddhartha the Enlightened. These men attained a state of mind and quality of character that exhausted the superlatives of their disciples.

But there are records of a score at least of other men who gave evidence of having reached the same type of consciousness. In the experiences of some of them certain phases were emphasized more than in those of others. Differing racial and social backgrounds determined the idioms, concepts, and illustrations in their messages, and even influenced their personal morals. Nevertheless, they were all kin. They reported a similar mystic experience, followed by or accompanied by a sudden attainment of a new state of consciousness.

Let there be made no mistake of assuming that these men became immediately morally spotless, intellectually infallible, and physically omnipotent and invulnerable, although some or even all of these perfections were later ascribed to them by their overenthusiastic disciples. The experience did seem to strengthen them in all these ways, as we shall see, but they were still men. Their cosmic consciousness did not annihilate their self-consciousness, out of which,

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indeed, it had grown, as self-consciousness grew out of the simpler consciousness of animals.

Self-consciousness was a sharpening, focusing, deepening, and intensifying of the dull, scattered, shallow, and vague consciousness which preceded it, and cosmic consciousness bears the same relation to self-consciousness in the sense that it is superior to it.

Cosmic consciousness is, as we have seen, consciousness of the cosmos. Cosmos is a Greek word and means the ordered or orderly universe, as opposed to chaos, which is universal disorder. When a man attains cosmic consciousness, the area of his awareness widens to include the cosmos.

But cosmic consciousness is not merely an intellectual awareness of the fact that there is a cosmos. The knowledge that there is a universe countless millions of light-years in diameter, containing a great many supergalaxies of galaxies of solar systems, the stars of which contain somewhat less than a hundred chemical elements in various combinations, and that, on one planet at least, one or more of these chemical combinations became alive and from it or them various biological forms have evolved, of which he is one—all that knowledge does not make a man achieve cosmic consciousness, except in a certain academic intellectual sense.

A man may become cosmically conscious without knowing those facts. He does not even have to accept the Babylonian-Hebrew, the Vedic, the Iranian, or any of the Greek cosmogonies. Nor need he champion the nebular, meteoric, or the planetesimal hy-

pothesis as to how the solar systems came to be what they are now.

All the knowledge of the astronomers, astrophysicists, physicists, chemists, biologists, and all the other men of science, could it be comprehended in the brain of one man, would not make him cosmically conscious, although that information and understanding may yet prove an approach to that state.

The men who have thus far attained it seem to have done so more through their emotions than their intellect. Perhaps it would be more nearly accurate to say that they did it by intuition, which seems to lie in the borderland between intellect and emotion and to have some relation to instinct.

Instinct is commonly taken to mean inherited behavior, that is, acts of an individual determined before his birth by the mode of behavior of his kind of organism—this as opposed to habits, which are acts of the individual acquired by him and based on his own experience.

Intuition is understood as the power of apprehending or knowing a fact or value immediately—this as opposed to intellect, which is the power of apprehending after the longer process of reasoning.

The relation between intuition and intellect, on one hand, and between intuition and instinct, on the other, are not yet very well understood, even by the greatest psychologists. And as for the relation between instinct and intellect, that subject has been a battlefield since before the days of scientific psychology.

Perhaps when the relations between these three

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closely connected powers of the mind are better understood, we shall be able to speak with less hesitation and more certainty about what happens and how it happens when a self-conscious being becomes cosmically conscious.

Intuition was for a time rather frowned upon if not laughed at by scientists as a sort of feminine substitute for reason. It was classed as a type of guess, and its prestige among women was supposed to have risen because they remembered the times when their intuition led them aright and conveniently forgot the times when it was wrong.

The disrepute of intuition was due also to the fact that the word has been used very loosely, sometimes to mean mere sense perception and sometimes to include also the grasp of a concept. Again, intuition has been a refuge for those who could not justify a false belief or prejudice by logical reasoning. They just knew by intuition that it was true.

Theologians have often been guilty of employing this device, and that has cast doubt upon all their conclusions. But scientists are beginning to wonder if there may not be in intuition a legitimate approach to reality, and if the theologians (and poets and artists) may not be far ahead of them instead of way behind in the realm of superstition, fairyland, and wishful thinking, where scientists have patronizingly placed them. There may be more roads to reality than the road of reason, which has for so long a time enjoyed an official monopoly.

We have learned to distrust our feelings, and it will always be well to be somewhat cautious about

trusting them, for when we license the non-rational, the irrational is likely to try to do business under the same sanction. But it is also well to keep an open mind on so large and important a subject as the method of apprehending reality. We do not yet know enough to know that we know the only way to know. And truth was always a restless maiden. If we insist on her permanent marriage to reason, she may get a divorce and take up with intuition.

Discounting in advance the fact that very often what seems to be an intuitive and unreasoned apprehension of a fact or value may be due to an unrecognized deposit in our mind from a previous process of reasoning, we may still leave ourselves room to believe that there are certain elemental things that we know are true without stopping to figure them out. In the field of ethics the immediate apprehension of values seems especially credible, and there is a whole school of intuitionists or intuitionists.

In philosophy, too, the names of Spinoza and Bergson stand out as defenders of intuition. Spinoza classified knowledge into three grades, sense perception, scientific reasoned knowledge, and the third and highest kind, intuitive knowledge. And, singularly enough for our study, he characterized this intuitive knowledge as leading to man's realization of the whole cosmic order and process and of his own place in it, an understanding of the cosmos which dispelled all fear, subordinated passion, and by joyful acceptance of the universal order of things brought him great peace of mind.

This intuitive knowledge, *scientia intuitiva*, Spi-

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noza taught, was a direct outgrowth from the two lower forms of knowledge. Following his lead, there are some today who look upon intuition as a sharpened, quickened form of reason, a sort of flash-quick reasoning, so rapid as to appear instantaneous. In well-developed intellects a thought process which includes several steps occupies a very short space of time. When an experienced extemporaneous speaker is saying one sentence, he is thinking one or more sentences ahead.

But Bergson held that intuition was not an outgrowth of reason. Rather he conceived it to be self-conscious instinct. He considered intellect and intelligence to be highly overrated and of value largely in dealing with the material world. And since the early and long-continued function of intelligence was to deal with tools and suchlike material objects, it tended to treat life and thought in the same way, in spite of the fact that such a mechanical method fails when applied to life and thought.

Instinct has had more to do with life, and therefore intuition which has developed from instinct is better fitted to cope with such problems as our liberty, our place in nature, our origin, and our destiny. The light intuition throws, Bergson admits, is apt to be rather dim, but it "none the less pierces the darkness of the night in which intellect leaves us."

It may well be that the few men who have appeared on this earth who have attained to cosmic consciousness are samples of what can be done when our still clumsy equipment for apprehending reality shall have become developed to a far higher degree. It may

be that the reason why we have such difficulty in distinguishing between instinct and reason is because they are even now blending into a new faculty of the mind, intuition. Some think intuition is a development of reason; others, that it has evolved from instinct. Perhaps it is growing out of both.

Our reason is admittedly inadequate in dealing with some of our most pressing problems, the ones we call spiritual, perhaps because we have exercised it so long on material things. Our instincts also fail when we get out of the field of the organic or meet a problem which the race has not had before. We need a new faculty, a higher form of intelligence than either reason or instinct. Perhaps intuition, which has so much disturbed the rationalists that they have tried to laugh it out of court, as is our custom with something new which upsets our settled scheme of things, may yet be vindicated and come into its own.

Certainly men are seriously questioning the tacit assumption of many rationalists, mechanists, and materialists that the non-rational is necessarily irrational. It is not a mark of superstition and credulity to believe that there are more things in heaven and earth than we have yet dreamed of in our philosophy. It is the sign of an open mind, which should characterize every true scientist.

The phenomena of cosmic consciousness have not been sufficiently investigated by scientists, partly because the experiences of those who have attained it have been dismissed as theophanies, that is, alleged appearances of God to men. Such events have been deemed impossible and said to be mere delusions of

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mystics and religious fanatics with disordered imaginations. Along with other unusual personalities, these mystics have been classed as psychopathic cases. It is a temptation to call a man crazy whom you do not understand, or whose ideas run contrary to your adopted theories of what can or cannot be true. And scientists are habitually suspicious of religious people, especially when religious people talk about religion, concerning which, of course, they can be expected to know very little.

It is only within this twentieth century that scientific men have begun to pay any serious attention to the phenomena of religion. James' *The Varieties of Religious Experience* was the pioneer book in the field, and appeared in 1902. It has yet to be superseded, not because it has said the last word on the subject—indeed, it but scratched the surface, as James would himself have admitted—but because so few have followed him. Vast masses of recorded data have been left almost untouched, such as Wesley's *Arminian Magazine* with its many narratives, checked and verified by witnesses, and the religious literature of India, which has had yogis who knew more about mysticism and its effects upon the human body and mind than all the Christian mystics and anti-Christian psychologists taken together.

Some scientists are apt to make the mistake of thinking that if they find a word to name the psychological condition of a person who has "got religion," they have thereby explained religion or even explained it away. Religious experience is a reality. It makes things happen. It changes not only the habits

and character of a man, but the maps of whole countries. It is a mighty force and penetrates every other field of human endeavor. It stirs men to the depths; and human personality, which, after all, is the most important thing on earth, cannot be understood until religion is understood. And the particular religious experience which we have called attaining cosmic consciousness is, considering its remarkable effects upon the men who have attained it and upon their followers for many generations, well worth the attention of the best scientific minds. It is just as important as the ideality of time and space, the second law of thermodynamics, the spectroscopic analysis of the chemical constituents of Betelgeuse, or the wind-resistance of streamline motorcar design.

Just because a mystic reports his experience in theistic terms which a scientist cannot accept does not prove that nothing important happened. If a number of men have had an experience which includes remarkably similar phenomena, and, as a result of the event, have declared that they have a new outlook on life and death and all human problems, and have transmitted to millions of men their own enthusiasm so that these followers face death rather than give up the new faith, the thing is worth investigating.

We have said that the pattern of any one of these mystic experiences is much like all the others. That is a fact which is apparent to any student of comparative religion, but which is seldom admitted by the followers of any particular religion. Each religion claims that its particular founder was unique, and that where similarities exist in other religions, they were

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added later to the accounts in order to make the leader appear as great as any other. Jealousy among religionists has prevented the followers of any one religion from deriving the benefits to be had from a study of religion itself. For only by an impartial survey and a proper evaluation of all the data from all religions can we arrive at a correct estimate of any particular religion.

When the data of all instances of cosmic consciousness and of mental states bordering upon it shall have been collected and collated, its norm established, and its effects upon individual and society carefully studied, every religion will be the gainer. Many of the failures of religion are due to the placing of too much stress on matters of comparative insignificance, like methods of baptism, to the neglect or subordination of the more important elements. Other failures take their rise from misunderstanding and misinterpretation of the reports of the psychological experiences of the founders.

Most serious of all is the paralysis and confusion in expression which results from the trancelike state of the mystic. His incoherent and inadequate account of what happened to him leads to a double difficulty later, for his followers get off on the wrong track and his scientific critics have grounds for alleging his mental incompetency. Many of the mystics have themselves admitted and regretted the difficulty of describing just what happened to them, like Dante, who said, "My vision was greater than our speech."

But from the various accounts we are able to as-

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semble the common phenomena, which seem to include the following:

1. A visual sensation as of a bright light
2. An auditory sensation as of a voice or music
3. A sudden sense of mental clarity
4. A consciousness of the immensity and unity of the universe
5. A conviction that even material things are alive
6. A feeling of self-expansion to include all things
7. A disappearance of guilt, doubt, and confusion
8. An influx of great exaltation and joy of spirit
9. An assurance that immortality has already begun

The total impression may be summed up as an immediate, joyous, illuminating awareness of the unity, beauty, and immortality of the universe, which seems suddenly all alive and strangely related to and identified with oneself.

Not all these nine items are found in the records of every experience of cosmic consciousness. The accounts of the earlier mystics have been changed by their disciples, and even had they not been, it is doubtful if they would have been complete, for the subjects were not trained scientific observers. Sometimes they did not write them down and what we have is but the oral tradition, long afterward recorded by men who may not have been eyewitnesses of the event and may not even have seen the mystic himself.

Again, some of the nine items overlap each other or even coincide as the mystic remembers them. They blur into one another, and the entire experience usu-

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ally comes so suddenly that it is difficult for anyone to say just which sensation came first. In some instances, the experience was repeated several times in the same individual with varying degrees of intensity in each of its parts.

But the order given is approximately correct for most of the known experiences, and the total impression is practically the same in every instance. Indeed, the student of comparative religion and the psychology of religion is often amazed at the similarity of the testimonies, occasionally amounting to identical phraseology, although the accounts of the one may not have been accessible to the other. Of one thing the observer cannot fail to become convinced after careful study, namely, that all these men had the same type of adventure and attained the same kind of consciousness. And some of us suspect that it is the kind of consciousness that will characterize the men of the next stage of evolution.

We deprecate the necessity of using the word, mystic, to describe these men and their experiences, for that word meant in the Greek a man who practiced secret rites. It still connotes something mysterious and beyond human understanding. We contend that it is time we did understand this thing which is so powerful and valuable. We believe also that we can understand it if we study it as long and carefully as we have studied other less important matters. Too long have we accepted the dictum of those who have told us that it is a holy mystery which it is not meant that we should understand, something supernatural which has invaded human lives and transformed

them. The smoke of sanctity and the odor of holy incense surrounding and pervading the precincts of mysticism have concealed from investigation a phenomenon which is, after all, a human occurrence happening to human beings, and may be of great importance to all mankind from a scientific point of view.

But the words, mystic and mysticism, have already been accepted and we shall be obliged to use them, bearing in mind always that there is nothing supernatural about the thing they stand for, and that it is no longer a sufficient explanation of matters not yet understood to assert that they were acts of God. We may admit without shame that there are many things about human life itself which we do not yet understand, but we have faith enough in man to believe that his intelligence will soon penetrate most of the remaining mysteries, for he has already solved many before which he once prostrated himself in awe and worship.

It is significant that these mystics do not emphasize the mysterious side of their experiences nearly as much as do their credulous followers. Instead, they feature the light and understanding which came to them. The difficulties and problems of life were resolved and cleared up, rather than increased. The mists were rolled away. Their disciples took note of the wisdom and clarity of judgment, the understanding of all things which came to these unusual men, but immediately decided that therefore their masters were not men. Some god must have chosen to inhabit their bodies. The men with cosmic consciousness,

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however, insisted that they were not gods. They were men who had found something very precious which they would fain impart to all men. This light which had shone on them and irradiated them must become the light of the world.

But their followers threw so much mystery around them, even to the extent of deifying them, and so formalized and institutionalized the process, that the religions which grew up about these men have frequently brought darkness into the world rather than light.

Consider the travesty, indeed the tragedy, of the fact that because the cosmic illumination of Jesus came as he underwent lustration by the ancient rite of baptism, it was believed by many of his later followers that they could appropriate his wonderful experience and rise to newness of life simply by being baptized. Later Baptists knew better and regarded the rite as obedience to an alleged command of Jesus (although he did not baptize his disciples) and as an initiation into church membership. But countless men did believe it was the magic door by which they could enter the fold of the saved, and it even became a wholesale procedure, with entire nations being baptized into the Christian faith by zealous missionaries. As well might Buddhists have imagined that they could all attain enlightenment simply by sitting under a bo-tree!

This light will not shine upon all the men of the world until we have more understanding of what actually occurred. We need to eliminate the mysterious element and take cosmic consciousness out of the field

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of mysticism. Most of the men who thus far have attained even a small measure of cosmic consciousness have been classed as mystics, it is true, but they were usually so classed after they had had the experience. They were simply appropriated by the supernaturalists, and the naturalists have practically disregarded that whole field of phenomena.

Cosmic consciousness will come about naturally without the mystic experience when we understand the mystic experience.

Intuition is no magic divine power given by God to a few prophets that through them He might make a revelation to other men about the nature of reality. It is very likely a new and higher form of intelligence evolved from reason or instinct or both, and those men who have had it have been naturally evolved experimental forms looking toward the appearance of a new type of man. We may venture to predict that in that new type of man intuition will occupy the place now held in us by reason, just as reason now holds the place once held by instinct. They will not do everything by intuition; reason and instinct will still have large parts to play. It should be remembered that now the place which reason holds in our lives is a very much smaller one than that held by instinct. The majority of our acts are instinctive, or at most habitual, at any rate not rationally determined. Reason is, or should be and can be, reserved for the more important decisions. And it will be that way with intuition.

But intuition, it may be objected, is not always to be trusted. Is instinct always to be trusted? What happens when it comes up against a new problem or a

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variation of an old problem? It has to fall back on the old trial-and-error-or-success method and trust to chance that it may somehow hit upon the correct solution. Is reason infallible? Look at some of the decisions rendered by courts of justice and by judicial bodies selected from the men of the best reasoning powers.

What we should ask is: Was reason infallible among the first men who had the power to reason, and is it infallible in a child when he first begins to reason? Then the comparison would be more nearly accurate, for intuition as a means of apprehending reality is as yet in its infancy. And even now some persons reveal an ability to see the answer immediately to a problem which takes the reasoner some considerable time to work out. The almost instantaneous solution of complex arithmetical problems by an ever-growing number of otherwise normal people can be explained only as the evolution of the ability to intuit. Call them freaks, if you will, but remember that the same epithet and worse ones were applied to early scientists.

Man has ridiculed woman's tendency to depend on intuition rather than reason, and has supported his claim to greater intelligence by the indisputable fact that his brain is larger than hers. But, as Professor Parker of Harvard has pointed out in *Human Biology and Racial Welfare*, pages 94-95, while it is true that the average European male brain weighs four ounces more than the female brain, it is also true that his body weighs thirty-three pounds more than hers on the average. So, when we take that into consideration, we find that "the brain of man is only about 1.9

per cent of his total weight, while that of woman is about 2.3 per cent," and therefore woman has the last word on even that subject.

Of course, that strengthens the case for intuition. More attention will likely be paid to the intuitional powers of women, of poets, of artists, of psychics, and of mystics in the near future.

It is with the latter we are mainly concerned here, and we propose now to take up in turn the nine points or items we mentioned as usually included in the experience commonly called by theologians the theophany of the mystic, because the mystic frequently interprets his experience as the appearance of God to him, but which we prefer to term the arrival of cosmic consciousness.

The first of these, the visual sensation as of a bright light, we have discussed at some length in the introductory section. It is the most widely distributed of all the items, and may be taken as an important and characteristic indication of the state of cosmic consciousness, provided some of the other items also are present.

It should be remarked too that while the bright light, which is almost invariably mentioned, is usually evidently subjective in origin, it sometimes was an objective light, such as the appearance of the sun. The theophanies of both Zoroaster and Buddha occurred at daybreak, and Paul's took place at midday under the blaze of the Syrian sun, while St. Patrick definitely mentions the morning sun as occupying the central place in his experience. We have his own account written in Latin in his *Confession*, Chapter

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Nine, and it is worth repeating here because it is of considerable significance and not very well known.

This theophany took place probably on the coast of Gaul, where Succat, alias Cothrigge (hence the Latinized Patricius), was shipwrecked and nearly starved. The survivors eventually found a herd of swine, on the hastily cooked flesh of which they gorged, which probably accounts for the nightmare which evidently preceded the theophany as recorded in the following excerpt:

Now on that same night when I was sleeping, Satan assailed me mightily, in such sort as I shall remember as long as I am in this body. And he fell upon me as it were a huge rock, and I had no power over my limbs. But whence did it occur to me—to my ignorant mind—to call upon Helias? And on this I saw the sun rise in the heaven, and while I was shouting “Helias” with all my might, lo, the splendor of that sun fell upon me, and straightway shook all weight from off me. And I believe that I was helped by Christ my Lord, and that his Spirit was even then calling aloud on my behalf. He called for me; and I hope that thus it shall be in the day of my necessity, as in the Gospel it says, “In that day the Lord testified, ‘It is not you who speak but the Spirit of your Father who speaketh in you.’” (*Matthew x:20.*)

Whereas a devout Christian would contend that Patrick was following the example of Jesus on the cross, who called upon God with the phrase, “Eloi, Eloi,” translated as, “My God, my God,” there is some possibility that Patrick was calling upon the sun, the Greek name for which was “Helios,” for the sun appeared as he was calling.

Probably, however, we have here noteworthy evidence of what often happens in a theophany. The

mystic identifies the light as a manifestation of deity, and Patrick revealed that fact by the word he shouted. He was himself surprised by his choice of that word, as he indicates in his account. If there be any who wonder how Patrick knew Greek, they may find an answer in the fact that it is quite possible that the Irish church was of Greek origin inasmuch as we find many Greek names, such as Odissus and Photius, in the early accounts of the life of St. Patrick.

It will be noticed also that in this account of his theophany he mentions having heard a voice. Christ was calling aloud on his behalf. Yet it was Patrick's own voice that shouted "Helias." And that he meant plainly that Christ had used his (Patrick's) voice is corroborated by the quotation with which he closes that chapter.

Perhaps here we have a clue to other voices heard in mystic trances. This second of our nine marks of a theophany does not always appear in the accounts. Some hear music rather than voices, and there is considerable vagueness about all the audible phenomena.

In Paul's trance on the Damascus Road one version of the affair states that those with Paul heard a voice but another version says "they heard not the voice." (Compare *Acts of the Apostles* ix:7 and xxii:9.) When Muhammad had his experience, no light is mentioned in the earlier accounts, but we hear of strange noises, like the ringing of bells, and of indistinct murmurings as of voices.

It is at this point that the mystic phenomena of theophanies most resemble spiritistic phenomena. The spiritists interpret the lights and voices as coming from

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the spirits of departed friends and relatives. The mystics interpret these manifestations as coming from God.

Whether we accept either or neither of these interpretations, we need to investigate all these matters scientifically, for it may be that we have here a new power of human personality. We are not to be accused of credulity if we assert that mystics and mediums possibly have a certain sensitivity to or direct apprehension of some aspects of our environment which are not apparent to the rest of us. Our disagreement with their interpretation of their experiences is no reason for denying that something took place which our own ignorance does not yet permit us to describe in scientific terms.

As for mystics who heard or thought they heard voices and saw great lights, there is one thing about them that most assuredly cannot be laughed away, and that is the tremendous driving power which thereafter animated their previously rather colorless and apparently insignificant personalities.

It was as if the light were the visible aspect, the lightning, and the voice the audible aspect, the thunder, of a psychic electricity which charged their dynamos with a force which soon produced remarkable effects in them and in those whom they met.

Remember what took place in the history of France when the simple peasant girl of Domremy heard her voices.

Remember what happened in wild Ireland after Patrick returned there, called by the *vox Hiberionacum* of his second theophany.

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Visit our own West and view there a mighty Mormon civilization in a desert transformed by those who followed an apparently half-crazy lad who obeyed the voices of the "two glorious personages . . . surrounded with a brilliant light which eclipsed the sun at noon-day."

Recall the man, "breathing out threatenings and slaughter" at the Christians, who heard a voice at noonday and thereupon turned right-about face and became their greatest missionary.

And the next time you write an A.D. after a date, recognize that you are honoring a peasant carpenter who said he saw the heavens opened and heard a voice.

Call all these men and women psychopathic cases if you wish, but you must admit that whether it was a case of *metanoia* (conversion) or *paranoia* (derangement), the *nous* (mind) in the case had powers far beyond the ordinary mind, once it was charged with this new dynamic force.

Before leaving these first two items, the related phenomena of the lights and the voices, there must be noted the rather interesting fact that there is evidence in several of these instances that some part of both the light and the voice seems to have been transferred to the personality of the prophet. That is how it appeared to their followers, at any rate.

It was as if the effulgence that the prophets saw in their vision irradiated them and thereafter shone from their faces, particularly, and as if the voice they heard continued to speak through them.

We have such testimony as that after Moses came down from Mount Sinai, where he had talked with

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God, "the skin of his face shone," and the well-known account of the "transfiguration" of Jesus is an even better instance. Much of this was probably in the imagination of their admirers, but there can be no reasonable doubt that the radiant personalities of many of these mystics gave the impression of being lighted without and within.

One wonders whether the photisms, the visions of great lights, although they may have been connected with objective realities such as the sun, may not have been subjective in the main. Certainly the whole area of these phenomena of illumination needs much more study than psychologists have yet given it.

As for the voices heard, they had their echo too in the mystic. Individuals who had been rather reticent and not given to much speaking in public began to use their own voices freely after they had heard the voice of the theophany, and proclaimed far and wide the message of salvation which they felt constrained to utter. Their former timidity vanished. They themselves became the Voice they had heard. And it was recognized as a voice of unusual power. They spake as never yet man spake: they spake with authority and not as the scribes.

The new appearance of radiance of personality and the new eloquence were evidences of the new consciousness they had attained.

The third mark of this new consciousness was a sudden sense of mental clarity. Even the minor mystics record this sense. It appears almost simultaneously with the coming of the great light, as if the light itself revealed to them all things, producing an illumination

which lighted up not only their physical environment but also the problems of life. Suddenly everything becomes clear; it is a mental and moral illumination. In the light of the burning bush, Moses' duty became plain to him. He must free his people from Egyptian bondage.

Zoroaster suddenly saw his duty. "The wail of the kine" came to his ears as he pondered in his mountain cave, and although he protested like the earlier Moses that he was unfit for the role of prophet-missionary, he saw so clearly what had to be done that he must needs do it. In some of these theophanies, we get the impression that the illumination did not cause the mystic to see the duty which lay before him, but that after long pondering on the needs of his people he suddenly realized what must be done, and the overwhelming conviction came with such force that it produced the illumination.

This mental clarity of comprehension extends to cover not merely the immediate surroundings and the duty of the mystic, but the entire universe, which perhaps for the first time is viewed as a unity. This fourth aspect of the coming of cosmic consciousness has an almost stereoscopic character. The universe, which had before been seen only in part and only as a plane of two dimensions, emerges as a totality and attains depth and sphericity with three-dimensional appearance. The mystic suddenly feels as if he were seeing all around and back of things.

Not only the immensity and overwhelming vastness of the universe is impressed on his consciousness, but also, and even more, a sense of its integration and

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the inner harmony of its laws. It was the chain of causation which impressed itself upon Gautama Siddhartha when his enlightenment came and he became the Buddha. A similar idea is expressed by Paul: " . . . all things work together for good to them that love God"

Even more than the sense of the immensity and unity of the universe, these prophets mention the conviction which comes to them that all things, even material things, are alive. Like the prince entering the courtyard of the sleeping princess and finding all the servants asleep in the posture assumed many years ago, only to witness them all spring to life as he kisses the princess, so there comes to the mystic a view of the resurrection of all things about him to vibrant life.

He feels that they always were alive and that his own eyes have just been opened as if he had just been reborn, and into a new world. In one way of looking at it, it may be that the coming of cosmic consciousness is accompanied by an ability to see the *élan vital*, the cosmic impulse itself, which from of old has always been taking on new forms of life.

But the most significant point about the experience is that the person who awakes to the immensity, unity, and vibrant life of the universe has an overpowering feeling that he is related to it all even to the extent of identity. There is a sense of self-expansion to include all things.

Matter has become alive and conscious in him.

A casual observer of St. Francis of Assisi, hearing him talk to the birds and flowers, would have said that the good saint was talking to himself. He was. For he

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felt, as do many who do not confess to any mysticism, that he was talking to a living part of the universe comprised within his own personality.

It may seem rather silly to those whose self-consciousness has not expanded to cosmic consciousness. But the poets and mystics have had considerable scientific support of late in the discoveries which reveal that every tiny atom of so-called inert matter is vibrating with motion, if not with conscious life. Our life, with all its physical, emotional, and intellectual aspects, is merely a higher form of motion.

The cosmically conscious person is simply more responsive to the vibrations of all things about him. His psychic sensitivity has been intensified by his experience. He has been charged with the cosmic electricity of the *élan vital* and is receptive to waves which duller minds fail to record.

All of which he frequently sums up and symbolizes by saying that he has seen God and God has entered into him. God has spoken and has called him His own beloved son, or he has been adopted and can be so familiar as to call God, "Abba. Father." That may be the only possible way he can explain to his friends what has happened to him, for it is the only language they can understand. And his own previous training has been such that theistic terminology is what he naturally employs.

He may have heard of other theophanies, and the similarity of the details of his own experience to the accounts of what happened to the former prophets leads him to interpret his own thrilling affair in the same way. Once a name has been fastened to an experience,

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it is hard to change it, and to detach the advent of cosmic consciousness from the theistic interpretation of it is always difficult.

Even Gautama Siddhartha the Buddha, who was certainly non-theistic if not atheistic, and the original account of whose illumination or enlightenment contained no mention of any god whatever, is today himself worshiped as a god by millions of men. The limitations of language and the tyranny of terminology prevent progress.

When the cosmically conscious person feels this self-expansion to the extent that he identifies himself with the universe, he is apt to make statements which seem very extravagant to those around him who have not had the experience. When he calmly states that he is the son of God, or boldly debates with and denounces the religious authorities of the day (as did Zoroaster, Jeremiah, Jesus, Paul, Muhammad, Luther, and many others), he is charged with blasphemy or heresy, and sometimes suffers torture and death.

There is frequently recorded, however, a sense of the disappearance of personal identity. When his self-consciousness expands into cosmic consciousness and all things have become new, he feels his former self swallowed up in the immensity of the new universe which he has discovered. The almost indescribable difference between his new state of mind and his old one so impresses him that he refers to his former self as dead. He has put off the old man and his deeds. He has been born again and walks in newness of life.

In a sense, that is true, a sense well explained by Dr. J. Middleton Murry in *God*, page 140, as follows:

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If then we regard mystical "knowledge" under the limitations of scope allowed to it by intellectual knowledge, we are compelled to regard it as an immediate self-awareness of one all-comprehending subject. It is evident that this self-awareness of the one all-comprehending subject happens in the individual consciousness. A fundamental unity in the Universe of which the subject is necessarily a part, reasserts itself through him because of the momentary breaking down of the conditions of intellectual knowledge. It is not, and cannot be, that in such a moment the individual, as such, is aware of that unity, for that would reconstitute the distinction between subject and object which is obliterated, and be an act of intellectual knowledge; it is that the fundamental unity is aware of itself in him.

The reason, then, for both seemingly antithetical sensations of (1) self-expansion to include the universe and (2) self-disappearance altogether is this—that in the exalted moment when self includes the universe, the consciousness of self must necessarily disappear.

This is, of course, the Buddhistic *nirvana* and the Hindu absorption into Brahm. It is the Christian mystic's sense of being at one with God or Christ. It accounts for actions which are hard to explain otherwise on the part of the ecstatic mystic. Personal belongings are given away, even one's clothes. The body is mistreated and mutilated in a sublime contempt of pain. Even death is welcomed as presumably affording perpetual union with God. To depart and be with Christ is far better than to remain here.

The danger of mysticism lies right at this point—in its otherworldliness. The mystic says even to his own mother, "What have I to do with thee?" He refuses all his social obligations. If he pays his taxes, it is in the spirit of "Let the ruler have what he demands,

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but be sure you give the heavenly Ruler what He demands." The mystic sometimes leaves his family for others to support, and retires to a monastery or takes to the road, saying that his disciples are his new family. Hence the world which he forswears has learned to be wary of the mystic and to suspect his motives.

On the other hand, the better-balanced ones of those who arrive at cosmic consciousness manifest a heightened sense of social responsibility. They want to save the world. To be sure, some of them mean by that simply that they want the world to follow them; but even in that instance, it is because they believe that they can lead the world to a happier social state. There needs to be a book written about the great social reforms instituted by those to whom have come theophanic visions.

In it would appear Zoroaster, who seems to have been aroused originally by the Turanian cattle-raiders who were making the lives of his people miserable. He is best known as a religious leader, but he was also the one who led his people into agriculture and settled home-life from their precarious seminomadic existence.

The list of mystics who became social reformers would include also such names as Akhenaten, the first internationalist, who preached and sang of the brotherhood of man in the fourteenth century B.C. and went down to defeat because he refused to wage aggressive warfare; Moses, who instituted health measures and sanitary reforms which are the marvel of those who study them; and Gautama the Buddha, whose first sight of human suffering led him to abandon all his

wealth and seek some way to alleviate that suffering.

Confucius would be there, whose main concern was to establish a properly governed state; Jesus, whose teachings have inspired thousands of social reformers in the centuries since his day; Muhammad, who united wild tribes into a nation and founded a temperate empire centuries before Christians had begun to think of eschewing alcohol; George Fox, who taught the folly of slavery and war when such teachings were exceedingly unpopular; and many other prophets whose social inspirations came to them as the direct expression of the new power within them.

Mysticism may have much to answer for because of its ascetic abandoning of the world to its fate, but there is much more to its credit in the field of social reform than is commonly known.

The loss of the consciousness of self as cosmic consciousness arrives, which Dr. Murry explains in the quotation given, might raise the question of the value of cosmically conscious persons in this world. What good would be a world of men who lacked self-consciousness? If even a comparatively small number of men were apt to lose consciousness, and literally pass out whenever the trance came on, it would be rather inconvenient, to put it mildly.

There need be little concern on that score, for the mystic state requires considerable preparation, as the people in India know so well, and is very unlikely to come upon those who are busy at work. Moreover, the complete suspension of consciousness of identity lasts but a brief while. We can afford to support a few mys-

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tics, even if some of them are not producers of things of economic value.

Their real value in the future may be as subjects for study and experiment, that we may learn enough from them about cosmic consciousness to be able some day to appropriate the values of their experiences and ultimately arrive at the ability to become aware of the universe without having to wait days for the spirit to move. We shall find in due time that our intuitional intelligence will grow to the point where without trance we shall know and feel our true relation to all things.

We have so far discussed six of the nine items which we listed as marks of cosmic consciousness: the visual sensation as of a bright light, the auditory sensation as of voices, the sudden sense of mental clarity, the consciousness of the immensity and unity of the universe, the conviction that even material things are alive, and the feeling of self-expansion to include all things so that the individual is identified with the universe; and we have noted the relation between these phases of cosmic consciousness. The remaining three may be grouped together, for they are closely related after-effects of the experience, that is, they are products of the consciousness of self-identification with the cosmos and are usually mentioned as surprising results remaining in the individual consciousness.

These three accompaniments of the sense of cosmic consciousness are: the disappearance of previous feelings of guilt, doubt, and confusion, the influx of great exaltation and joy of spirit, and an assurance

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that immortality has already begun. They might be summed up by stating that the person has an abiding joyous conviction that everything is all right now and will always be so.

For some time before their experiences, the individuals whose biographies are known to us appear to have been disturbed and unhappy because of an oppressive sense of sin, or doubts about the worthwhileness of life, or confusion from many unsettled problems. Later disciples who would admit no imperfection in their heroes do their best to remove from both the oral and written records any admission of sin in the master, and relate infancy narratives to prove the lifelong perfection of his character. There is a tendency in every world religion to claim a miraculous virgin birth for the founder.

But the sense of relief so gratefully welcomed and reported by the mystics themselves reveals to the psychologist the fact that there was great mental tension previously. In some of the accounts you can almost hear the long-drawn sigh of relaxed stress and strain. The divided, troubled, and weary self has found unity, peace, and rest at last. The sense of sin is gone; the doubts are resolved; the confusion has disappeared.

Then comes great joy. Their exaltation is beyond their ability to express. All the superlatives of their vocabulary are soon exhausted. If they are theists and have interpreted their accession of cosmic consciousness as a theophany, they are extravagant in their hymns of praise to their God. The world's literature is enriched by the psalms of joy which they have com-

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posed. And the great music of the world has derived from the exulting ones who formerly praised God upon an instrument of ten strings and now sing of His glory to the accompaniment of mighty organs.

The greatest after-effect of the attaining, even for a moment, of cosmic consciousness, and the most important for our present study, is the assurance of immortality. This assurance is not merely the premonition of future immortality; it is the conviction that it has already begun. We shall later weigh the great significance of this distinction.

These, then, are the nine marks of cosmic consciousness: the light, the voice, the mental illumination, the consciousness of the size and unity of the universe, that it is alive, and that it is identical with oneself, the loss of guilt, doubt and confusion, the coming of great joy, and the assurance of present immortality.

Dr. Richard Maurice Bucke, to whom we have already referred, who was the great pioneer in the study of cosmic consciousness, gives eleven "marks of the Cosmic Sense," as follows, on pages 65-66 of the first edition of his book, *Cosmic Consciousness*:

- a. The subjective light,
- b. The moral elevation,
- c. The intellectual illumination,
- d. The sense of immortality,
- e. The loss of the fear of death,
- f. The loss of the sense of sin,
- g. The suddenness, instantaneousness, of the awakening,
- h. The previous character of the man—intellectual, moral and physical,
- i. The age of illumination,

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- j. The added charm to the personality so that men and women are always (?) strongly attracted to the person, and
- k. The transfiguration of the subject of the change as seen by others when the cosmic sense is actually present.

It is obvious that some of these can hardly be separated, such as the sense of immortality and the loss of the fear of death, and that the last two (j and k) are really one. He has omitted the auditory sensation of hearing a voice, the consciousness of the immensity, unity, and viability of the universe, and the influx of joy. But elsewhere in his book he gives instances of these phenomena.

He considers the age of illumination important, but since the list of thirty-four individuals which he uses in his calculations includes many little-known persons designated only by initials, and omits many well-known mystics, and since his conclusion as to the age of illumination embraces an entire decade (thirty years old to forty), there is little value in raising the point at all. It is better known now than when he wrote his great book that physical age and mental age vary greatly from each other. If the mental age is unknown, as of course it is in his chosen cases, the calculations based on physical age are misleading. But his book is valuable today because of its collection of verbatim reports and testimonies of those who have experienced cosmic consciousness, some of which are not available elsewhere.

Among those listed by Dr. Bucke as having attained this state there are fourteen who ought to be included in any list of the cosmically conscious. The

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rest are either obscure individuals or men well known in other ways whose reported acts and words require some interpretation in order to prove them great mystics.

The fourteen are Moses, Isaiah, Li R (Lao-tse), Gautama, Jesus, Paul, Plotinus, Muhammad, Dante, John Yepes (St. John of the Cross), Behmen (Boehme), Spinoza, Swedenborg, and Walt Whitman, the great personal friend of Bucke's.

To these we would add Zoroaster, Jeremiah, Augustine, Patrick, Aquinas, Nanak, Luther, Wesley, Fox, Jonathan and Sarah Edwards, William Ellery Channing, Joseph Smith, and Mary Baker Eddy. These were all religious leaders, founders of religions, sects, or movements, and they all had theophanies which we will not describe here as we have done so in considerable detail in *The Story of Religion*.

There are other almost countless mystics in the history of mysticism, some of whom may seem more important than some we have named, but we have sought to include only the best known, most influential, and especially those whose recorded theophanic experiences best illustrate the phenomena of cosmic consciousness. Anyone who reads the biographies of these remarkable persons will be convinced that they were possessed of a type of consciousness different from that of the vast majority of human beings, even including in that majority thousands of men who are reckoned among our greatest. They will also be convinced that these twenty-eight had remarkably similar experiences, and of a sort to warrant their inclusion in

what might even be called a separate species of consciousness.

In short, they are geniuses, to put it in another way, for genius is defined by the dictionary-maker as "the intuitive and spontaneous, in opposition to the merely disciplined and trained." Dr. N. D. M. Hirsch, near the end of his exhaustive study of *Genius and Creative Intelligence*, pages 298, 316-17, comes to the conclusion that:

The genius differs in *kind* from the species, man. Genius can be defined only in terms of its own unique mental and temperamental processes, traits, qualities and products. Genius is another psychobiological species, differing as much from man, in his mental and temperamental processes, as man differs from the ape . . . The genius guides and inspires mankind, not merely by illuminating man's past and resurrecting his spiritual affinities, but more significantly by intimating a possible future, and insinuating ideals and norms that dimly presage that future. . . . And Myers suggests that geniuses are *progenerates*, not degenerates. Is it not true that "their perturbation masks an evolution which we or our children must traverse when they have shown the way"?

Cosmic consciousness is a mark of one type of genius and those who possess it merit our continued careful study because of this pioneer quality which inheres in them. They are, as Mary Austin has said of geniuses in general, "the growing tip of the race-life," and he who would discover what our human life may flower into needs but to examine these buds.

If man is to continue his progress, his brain must evolve with him. The brain of the self-conscious animal man shows great advance in structure from the brain of the pre-self-conscious animals that preceded

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him. If we are to evolve still further into the cosmic consciousness of which the mystics have given us prophetic glimpses, we shall need to improve our present brains. There is, as far as we can now see, nothing to prevent that in the structure of the brain itself. It means still further development in that delicate mechanism that has already answered every demand made upon it. There is the tremendous push and drive of evolution itself to count on.

Dr. Frederick Tilney in *The Brain From Ape To Man*, pages 1044-45, says that when we look back along the long line of our descent through the mammals, the premammalian reptiles, and still further back:

. . . it is possible to sense the full force of the impetus in that irresistible momentum which has carried the great vertebrate phylum upward and onward through the ages and may still carry us onward. This is a conception that should make an urgent appeal for thoughtful consideration regarding further possible readjustment of human behavior. . . . is there still a latent power in the human brain for the expression of yet unsuspected potentialities and beneficial progress? . . . This greatest problem of humanity is susceptible of solution. It awaits only the intelligence, the patience, the persistency and the determination to solve it.

In examining the phenomena of cosmic consciousness, we discovered that they included an assurance, indeed a conviction, in the minds of these men that they had already attained immortality, not merely that they would sometime become immortal, a distinction whose significance should now be weighed in the light of the fact that the further evolu-

tion of human beings is possible and may proceed in the direction of cosmic consciousness.

If the person who attains cosmic consciousness becomes thereby convinced, with a sort of intellectual comprehension, that he shall one day become immortal, that is all very well, but it is not remarkable, for many ordinary folk have a hope of immortality which amounts to a conviction. But if, with the arrival of cosmic consciousness, there comes almost immediately a strong conviction, which includes intellectual, intuitional, and emotional elements, that he is already immortal, as much so as he or anyone else ever was or ever will be, and if his life thereafter is such that his friends define immortality as the state of being like him, then there is justification for the assertion that cosmic consciousness truly is immortality, and that in attaining the one you attain the other.

Furthermore, since the arrival of some men who have obviously reached the state of cosmic consciousness seems to indicate the appearance among us of a new and highly desirable type of mind, a further extension of the evolutionary process, then it would seem to be the proper thing to ask ourselves if we have not here a new approach to the problem of immortality.

If it be asserted that these individuals are not all well-balanced persons and sometimes exhibit marks of mental disturbance, we need not be alarmed. The line between genius and insanity is well known to be poorly defined. Some of the greatest accomplishments of men thus far have been by those whom their fellows judged insane, crazy, foolish. The mystics' incoherent

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accounts of their sensations at the time when they became cosmically conscious, and their extravagant descriptions of what they saw and heard, can be discounted because of their overpowering emotions, perfectly to be expected under the very unusual circumstances.

Suppose some of them were partly or temporarily insane. They were literally freaks of nature, but that is no reason for condemning or disregarding them. They were experiments in a new type of consciousness being worked out in the laboratory of evolution. Strange specimens have come from that laboratory ere now, and some of the strangest of them became our own direct ancestors. How very peculiar the first men must have seemed to the very animals whose own ancestors further back had been man's ancestors! How the blackfellows of Australia were astonished at the utterly uncouth appearance and actions of the first Europeans who came among them!

The advance guard of a new stage of evolution must, in all necessity, appear strange to those of the previous stage. Here comes Joshua ben Joseph, called Jesus the Christ. How the hard-fisted Roman soldiers must have chuckled in their barracks when they heard of this carpenter from Galilee who was preaching the insane doctrine of not resisting evil, of turning the other cheek after a man had struck you in the face!

But Roman centurions became his disciples, and millions of men have seen in him the type of man they want to be.

This Jesus, were he indeed the only sample of the cosmically conscious person ever to have lived among

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us (as he was the best), would suffice to prove our point that cosmic consciousness and immortality go hand in hand. The personality of the Man of Galilee is the greatest argument for immortality, not in the rather materialistic way the church has usually taken it, but from an evolutionary point of view.

If we could but forget the crude attempts his disciples made to prove his immortality by stories of the resurrection of his body, we might discover the real significance of his remarkable mind.

In fact, and a strange fact it is, the greatest obstacle to the belief in immortality is the collection of miraculous stories and theories of immortality which men have assembled in the past to justify that very belief.

CHAPTER EIGHT

THE VARIETIES OF IMMORTALITY

HOW THEY RELATE TO COSMIC CONSCIOUSNESS

IF THE FOURTH CRISIS of evolution is approaching, heralded by the occasional experimental or sport form whom we call the mystic, and if one of the characteristics of these cosmically conscious folk is their conviction of their immortality, then it is quite possible that man is in the process of becoming conscious of his immortality.

All the various theories and doctrines of immortality, the interest in them and the agitation about them, are indications of that fact. One might be distressed and confused by this yeastlike working of half-formed hopes, guesses, intimations, foregleams, emotional yearnings, intuitional awareness, and intellectual arguments, if he did not interpret it all as evidence that we are approaching the great period of the self-recognition of immortality by humanity.

It took millions of years for life to emerge in matter, millions more for consciousness to develop in the animals, many thousands at least for self-conscious-

ness to appear, and it has already taken thousands of years for man to get even to this present point of partial consciousness of his own possible immortality.

A brief review of the most important forms taken by the evolving faith in immortality will reveal an ever-changing concept varying with the thought-forms of the times. It is of course impossible to arrange these theories chronologically and demonstrate a logical progression century by century to higher forms of the immortality concept. Plato was far in advance of the majority of men now living. Jesus had more of cosmic consciousness than any man who has since lived. But the appreciation and understanding of Plato and Jesus by other men has steadily grown and is now higher than in their own days or among their own disciples, who were frequently sadly mistaken in their evaluation of some of their masters' teachings.

The origin of the belief in immortality is uncertain both as to date and cause. Some scholars have maintained that dreams in which he seemed to meet people of another world led early man to believe that when he lay down for his last sleep, he would awake in that world. Others are inclined to think that the idea of immortality arose from the fact that when a man visited again a place where he was wont to meet a friend who had died in the meantime, his memory associations gave him the occasional impression that the friend was still in that place. Thus would arise the idea of ghosts and spirits, and hence belief in survival.

But these theories of the cause of the origin of the belief in immortality do not go deep enough. An adequate theory would take into account the fact that

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even when man has arrived at a stage of evolution when he understands the psychology of dreams and no longer believes in ghosts and spirits, he still seeks to find a basis for a belief in immortality.

The cause of the origin of the idea of immortality is also the cause of its continued persistence in spite of the fact that the bases upon which various theories of immortality were originally established have been progressively overthrown.

The cause of both origin and persistence of immortality beliefs lies in an urge within man of which he cannot be rid. It is the evolutionary urge itself, the upthrust of the life-force, which, once it becomes self-conscious in man, "cries like a captain for eternity."

There is nothing more impressive to a student of the history and philosophy of evolution than to note how the countless different forms taken by the life-force bear witness to its dynamic and versatile persistence and particularly to its never-ending struggle to triumph over the limitations placed upon it by the constitution and properties of matter. Man himself is, in a sense, but an experimental form produced by the life-force in an attempt to develop a better animal, one which can cope more successfully than the other animals with its material environment.

Man has self-consciousness as an added tool given him by the life-force. In fact, he represents the coming to consciousness of that life-force, and because of an urge within him which dates back to the time of the first protocyte, he must needs ever seek to overcome the limitations of his environment. Every tool he has invented, every animal he has domesticated, every

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natural force he has harnessed—all these are steps toward his triumph over matter. They increase his confidence in himself and therefore make further progress possible.

His desire for immortality has been attributed to a selfish and egotistical yearning for personal survival, but it is not so much that as something deeper, something which he cannot prevent. It is the life-force represented in him which resents all limitations.

Every theory of immortality, then, is motivated by the desire to extend personality beyond its present limits. However crude the theory may be, it deserves our respect because it marks a great hope of mankind, a hope to escape from limitations, somehow, somewhere, sometime.

As we contemplate the idea of heaven as pictured by men of a previous theological epoch, we revolt at it. The intellect says, "I will have none of it. I don't want to go to such a place. I don't believe in immortality." But very quickly the rest of our personality says to our intellect, "So you don't like the old heaven and you can't accept the old idea of immortality. Well, hurry up and get a new heaven then, or at least an acceptable theory of immortality; for emotion, and intuition, and instinct, and the life-force itself simply demand it."

It is surprising for how long a time men were satisfied with the idea of a bodily resurrection and a material heaven. Some of the earliest graves we have opened bear silent witness to the hope of the resurrection of the body. The warrior's weapons were left beside him that he might have them to use in the

happy hunting grounds. And today there are still many thousands who believe in a literal heaven with golden streets such as John saw in his vision on Patmos.

The antiquity and persistence of the bodily resurrection theory have marked the whole idea of immortality with the stamp of material things, and if a person cannot possibly accept the thought of the re-assembling of the chemical elements of his decayed body and its transference to a heavenly city, he will probably reject any belief in immortality whatever. Many persons assert their disbelief in immortality when they really disbelieve merely in the most primitive form of the idea.

The bodily resurrection idea finds strong support in the Bible, for much emphasis is placed on the empty tomb of Jesus, on the story of how Thomas touched the wounds in Jesus' resurrected body, on the broiled fish that he ate, and on the fact that he himself said, ". . . a spirit hath not flesh and bones, as ye behold me having."

But the idea of a spiritual resurrection was even then abroad. Paul brought into Christianity his theory of a spiritual body, which is accepted by modern Christians, who quietly ignore the bodily resurrection idea. Paul was the more inclined to favor the idea of the resurrection of a spiritual body because of his difficulties with his physical one. His "thorn in the flesh" made him want to be delivered from this body of death.

In both the bodily and spiritual resurrection ideas the most important factor was that the individual

after death would be with his god. In India they had already carried the idea even further, and sought not merely to be near their god, but to be absorbed into deity to the extent of losing personal identity. And they believed that by proper preparation one might here and now experience that absorption. The yogis smiled when Christian missionaries told them of the glories of heaven to be attained by good Christians after death. What attraction had heaven to offer a yogi who had experienced *samadhi*?

Besides the bodily or physical resurrection theory, the Pauline spiritual body doctrine, and the Oriental absorption idea, there are several other theories which have attracted adherents, although most Christians would consider them mere substitutes for immortality.

One might be called material or chemical immortality for it is based on the idea of the indestructibility of matter. Since the human body, like all other matter, is composed of chemical elements in various combinations, and since science teaches that no matter is ever destroyed, but merely changes its form, the body of a man never perishes. It decomposes and, in time, its chemical constituents combine with other matter, but they never pass away. Certain poets have seized on this fact and have depicted the transformation of a man's body into a great oak growing over his grave, or have suggested that the soul of a maiden lives again in the rose nourished by her ashes.

Another theory of immortality recalls the fact that it is the germ plasm after all which is immortal. A man may die, but still live in his children and in

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their children. He transmits to them not only a certain type of feature or bodily form but also mental and moral characteristics. One difficulty with this biological immortality is that there are many who through no fault of their own are denied the opportunity of having offspring.

The immortality of influence satisfies some persons. They contend that if a man makes the most of his life he will influence other men, and his personality will live on after his bodily death. This is the theory upon which is based George Eliot's beautiful poem, "The Choir Invisible."

Then there is institutional immortality, a variant of the immortality of influence. The man who founds a great institution or who works to make it a success builds into it something of himself which persists after he has gone and gives him a sort of immortality.

The argument for immortality which has most often been heard recently among rather modern and thoughtful folk is based upon the value of personality. They say that the most valuable thing we know is human personality. All evolution has led up to it, and they who advance this argument point out that it is not likely that personality perishes if even the chemical elements composing the body in which the personality lives are themselves everlasting. They say that if the highest product of the whole world-scheme is created to last but a few years, then there is no reason or purpose in the universe.

This argument has great weight with many who have had to give up belief in some of the older theories of immortality and who find no satisfaction in the

thought of chemical, biological, institutional, or influential immortality.

It also affords for us a connecting link between the Christian doctrine of immortality and the idea of cosmic consciousness as immortality.

No one can honestly face the problem of immortality and consider its most important aspects without paying careful attention to the life, death, and influence of Jesus of Nazareth. Whatever theory of immortality you espouse, you find yourself bound to relate it to him, and if you reject belief in immortality, you still have him to account for. You must admit at least the immortality of his influence.

The difficulty which prevents some persons from believing in immortality is that trained logical minds cannot accept the accounts which have come down to us concerning what happened near Jerusalem on a certain spring morning a little over nineteen hundred years ago. The records are so confused that many people have said that since the accounts contradict themselves, nothing unusual could have happened. Such an immensely important thing as a man's attaining immortality cannot be believed on evidence that is self-contradictory.

But the truly scientific mind is not overly disturbed at contradictions in any account given by human beings. Otherwise there would not be much left to investigate. Witnesses in court, sworn to tell the truth, and extremely desirous of so doing, contradict each other on details of occurrences which they thought they had watched carefully. Science looks beneath the contradictions of witnesses to discover the

fact itself, and frequently finds contradictions of value in the sense that when men of different observational equipment agree on the main fact in question, their differing reports as to details indicate that there was no collusion. If four accounts agreed with each other in every respect, there would be a suspicion that they had got together on the matter, or that three of them had copied from one original document.

Something very unusual must have happened shortly after the death of Jesus to create so much excitement among his followers, and to cause the tremendous effect which ensued and which has been rolling up like a huge snowball ever since.

Let us admit that it is difficult to reconstruct the picture. The cleverest professional reconcilers have worked for centuries at the task, but no successful "Harmony of the Gospels" has yet appeared, as any honest scholar will agree. One account says that it was before dawn that the women came to the tomb; another, that it was after sunrise. One narrative says that a young man was there; another written fifteen years later says that it was an angel; a third written about twenty years after that claims that there were two angels. One record asserts that they found an angel outside the door of the tomb; another, that the angel was inside. One gospel declares that the women found the stone rolled away when they arrived; another, that an angel did it while they were there. In one story it was to Peter that Jesus first appeared in his resurrected form; in another, it was to Mary.

There are at least thirty contradictions as to detail in the accounts that have come down to us of the

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post-resurrection appearances of Jesus. Moreover, no one of the narratives can appeal to an Occidental, trained, scientific mind today as a true record of an actual occurrence.

What did occur? Upon what do the witnesses agree that we can believe without doing violence to our love of truth?

There is one very important agreement among them. They maintain with a conviction which must be noted with respect that this Jesus who had been crucified and who died on the cross was nevertheless now alive. On that faith the Christian church was builded. Persecution, torture, and death by burning could not shake that conviction.

We know for a fact that by the early part of the fourth century the teachings of this man had conquered the Roman Empire, whose soldiers had crucified him as a malefactor with thieves and robbers. Christianity, which was at first despised as the religion of servants, fishermen, harlots, tax-gatherers, and slaves, became the official religion of the greatest empire in the world within three centuries; and now, nineteen centuries after his death, is recognized as the dominant religion of four of the six continents.

Since this truly great religion which has lasted so long was founded and is still based upon belief that this carpenter of Nazareth with his simple message of love lived on after death and is still alive today, there must have been something very extraordinary about him, something dynamic in his personality.

In Jesus of Nazareth there must have resided the most remarkable human spirit that ever lived. Call it

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personality, if the word, spirit, has undesirable connotations. At any rate, in Jesus we have a man before whom all the world, Christian or not, bows in admiration, not so much in these later scientific years in admiration of his godhood as of his manliness, and of his being an exposition of the possibilities of human nature.

This man left his carpenter's bench after having helped his mother maintain the large family after his father's death, so we assume from hints in the gospels and in extra-canonical tradition, and gathered a few disciples with whom he walked and talked and rested by the lake called variously Gennesaret, Galilee, or Tiberias, upon the road through Samaria, and in the vicinity of Jerusalem. He taught his disciples but a short time: tradition says three years, but the oldest account relates incidents which seem to have been compressed within but one year. His disciples were a rather unpromising lot of men, seemingly selected almost at random.

When he had had time to give them but a few lessons, events, moving with the swiftness of a Greek tragedy, brought his early death.

It was all over then, so it seemed to them. They fled even before his death. None of his disciples saw him die: none saw him buried—facts which are frequently forgotten. They were scared men fleeing for their lives. Only one, Simon Peter, dared even to visit the trial, and he denied any acquaintance with the prisoner.

Back to Galilee they fled, disillusioned and afraid. Poor material for founding a world religion, one

would think. One can imagine them, brothers on their way home, sneaking along unfrequented byways and nervous at the sight of a Roman soldier, saying to each other, "We have been fooled. He said he was the son of God, but he couldn't have been. The Romans have got him now, and between them and the scribes and Pharisees that he called whited sepulchres, he hasn't much chance. They have probably killed him by this time. It is too bad, for he wouldn't hurt a soul, and when he talked, he made you think you were somebody." Home they went to their fishing and their tax-collecting, but they could not forget him.

But inside a short time they found themselves gravitating toward those spots where they had been wont to go with him. When one went to such a place, he found another already there, and soon others appeared. First two by two, then four by four, they gathered in the old haunts and talked about him. Then they began to look at one another with a strange look in their eyes, as they whispered, "He isn't dead. I saw him. I felt him. He is here now!" It was a strange psychological fact that they were sure Jesus was with them.

Reports had come up from Jerusalem about how he had been hanged upon the cross and then buried, but the disciples said, "That is all wrong. They couldn't kill a man like that. He is around here somewhere now, likely to appear any minute. If they killed him, he has risen from the dead." Then Peter and John, who had stayed in the vicinity of Jerusalem longer than the others, joined the rest of the disciples and told their stories.

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Believing with all their hearts that he was alive, they had to account for the other facts, and being a simple-minded folk and not at all troubled by scientific accuracy or verification, they soon created a body of oral tradition comprising the various stories in which they sought to reconcile as best they could both what they felt and what other people said had happened. That body of oral tradition, in part at least, was later written down. By the time it was written, it had doubtless grown considerably, as we can see by comparing the different gospels, for those stories are now known as the legends of the post-resurrection appearance of Jesus. The fact that they evidently lost nothing of wonder in the telling is, of course, apparent to anyone familiar with documents of the time.

Strip off all the miraculous elements and additions, and you will still have left the impression he made on his disciples, who all forsook him in his hour of trial and fled, only to find that he was still with them and always would be, closer to them than friend or wife. Something about him there was - - - -.

What was that something? It was this very something we have been calling cosmic consciousness, which has also been noticed in other men, but not to such an extent. In him the "growing tip of the race-life" burst into flower long enough for men to catch its fragrance, and the human race has never been the same since. It was a subtle and rather heady scent—in fact, intoxicating—and it is no wonder that on Pentecost the disciples were mistaken for drunken men.

The reason why the human race has not been the

same since is because in Jesus they got a glimpse of what a man might be. The Now-Men found among them a Next-Man, and the wonder of him exhausted their vocabularies. Men possessed only of self-consciousness tried with that equipment to appraise a man equipped with cosmic consciousness, and failed. They only knew that whatever it was that he had, which they knew they did not have, they wanted it badly. To be immortal would be to be like him. Of that they were sure. He had said something to that effect and they knew he was right. They were willing to bet their lives on it and they did. Thousands of them gladly embraced death because they were confident that at death they would go to the place he had promised to prepare for them in his Father's house.

It was difficult not only for men on the plane of self-consciousness to appraise the cosmically conscious Jesus. It was difficult for him to explain his cosmic consciousness to them, but he tried, and he succeeded to a greater extent than any other cosmically conscious man before or since ever did. Of what he told them, we know a little. What they remembered of his words, they wrote down later when they began to realize how precious they were. And of what they wrote down, we have probably but few fragments. They could only have written down what they remembered and they could have remembered only what they understood, and there must have been much that they could not understand. Some parts of what they did write are rather confused, and they record his doing and saying some things which do not

fit in with the rest of their picture of him. But we dare not impugn our witnesses.

And what they have preserved for us is infinitely precious, and is more valuable as we grow better able to understand what is in man, as he did. It is entirely possible, too, that excavations shall yet yield us more knowledge about him. If so, a single sentence known to be from his lips would be worth the wealth of a nation.

We are not here maintaining any theological position such as the deity or sinlessness of this man. His utterances as we have them do not seem to us to be always on the plane of cosmic consciousness or even up to the best social and moral standards of today. There were Greeks who lived long before his time who were wiser men in an intellectual way. We do not find ourselves able to accept the statement of the unknown author of the New Testament book called the *Epistle of Paul to the Hebrews* that Jesus "was in all points tempted like as we are, yet without sin." Husbands and fathers have temptations which he could not have known, and as for the "without sin" part, we recall that all three of the synoptic gospels, *Matthew*, *Mark*, and *Luke*, record that when a young man called him, "Good master," Jesus protested, "Why callest thou me good? there is none good but one, that is, God."

Christian apologists have not yet succeeded in justifying his recorded cursing of a fig-tree when he was fig-hungry and was disappointed at finding no figs thereon, "for the time of figs was not yet."

If one be trying to prove Jesus' sinlessness, om-

nipotence, omniscience, or other aspects of deity, these points would be more important than we reckon them. One could grant him much more leeway and still find him the best-developed human personality and the finest example of cosmic consciousness that the world has known.

The theologians and other professional religionists have too long monopolized this significant figure, and they have sometimes so disfigured him with embroideries, effeminacies, and haloes as to make him less attractive to the general run of men. In spite of these decorations, legends, and theological intricacies which have been attached to him, men find him infinitely compelling. There is no wonder that simple folk thought him a god. Even at this distance of time and space, background and thought-forms, there is something about him that gives us pause. As he called his fisher-disciples, so he attracts us today. We would follow him, follow him into a new era, the era of cosmic consciousness.

The world is full of books about him, but not of the right kind. The books that will appear in the future will pay more attention to him from the point of view of his psychology rather than his theology. But the fields will eventually meet, for the *theos* is, after all, but man's idealization of his own *psyche*.

It is not by regarding Jesus as unique that we shall best discover him and ourselves. There is no necessary virtue in uniqueness, and he himself never showed any of the desire that he should be considered separate from his fellows to the extent of the isolation which theologians have demanded for him. He was

not so much concerned with being thought the only son of God as he was that men should realize their own potentialities in that direction. Being the "first-born" did not interest him nearly as much as that he should have "many brethren."

Calling Jesus the "only-begotten Son of God" is a theological way of putting his outstanding leadership in the field of cosmic consciousness. We shall know more about him after we study the other men who also attained that state, even if they did not penetrate it so far, nor for so long a time, nor with such evident results. We must learn more about this type of mind and personality, for when we look at the life and character of Jesus and the transforming effect he had on the lives of comparatively ignorant and undeveloped persons who knew him, we are amazed at the power that so evidently emanated from him.

When we look also upon millions of men in the centuries since, who have had for their inspiration only the incomplete accounts of his life, plus contacts with other men likewise influenced at long range, and yet have had their lives transformed, we realize that we have here to do with what is probably the greatest personality product of evolution thus far and the promise of what the future may bring.

It is only when we regard Jesus as the forerunner of the men to be, the type of the men of the fourth crisis, that his full stature looms before us, and we have a sympathetic understanding of the state of mind of the astonished people who knew him "in the flesh," and expressed their estimate of him by calling him "God."

CHAPTER NINE

SCIENCE AND COSMIC CONSCIOUSNESS

IS SCIENCE DISCOVERING GOD AND IMMORTALITY?

THE NINETEENTH CENTURY, after Darwin, was a period of divorce in the relations between science and religion. The estrangement has run well over into the twentieth, but there have been signs for some time that there were on both sides desires for reconciliation, although neither cared to admit defeat.

Bergson was hailed by the clergy as the truce-bearer and by the scientists as a traitor, although neither side understood him very well. The religious men were, as a rule, not nearly well enough equipped in the knowledge of either philosophy or science to understand the significance of the points Bergson was making, but the word was passed around that here at last was a scientist who was on the side of the angels, and *L'Evolution creatrice* and its English translation, *Creative Evolution*, had a tremendous sale. Very few of the clergymen got beyond the first chapter in ac-

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tual reading, but they skipped through the rest and discovered some very good scientific stories for sermon illustrations.

Bergson found himself scorned by some of his fellow scientists, who were just as hasty as the clergy, in their way, for they evidently condemned the great French thinker as a poor scientist simply because the cloth had approved him. Very few on either side ever knew what Bergson did believe theologically, least of all Bergson himself, for which he was little to be blamed. Most theology is very hard to understand, especially for a scientist.

In his championing of intuition as a legitimate method of apprehending reality, however, Bergson did afford the religiously inclined more standing room than they had enjoyed for some time, except those who had dared to read Spinoza. There is one sentence of Bergson's to which attention should be called because of its significance in relation to the subject of cosmic consciousness. It was written in one of those flashes of insight which showed that he himself was equipped with that intuition which he so lauded, and it compresses in a few well-chosen phrases some of the points we have been discussing. He wrote:

In man alone is consciousness able to overcome the limitations imposed by matter and this fact not only explains the essential freedom of the human mind but also gives a ground for a scientific basis of belief in immortality.

This is another way of putting the fact that the coming fourth crisis is dependent upon the fulfilling of the third. Not until man so develops mind or con-

sciousness that he not only is able to overcome the limitations imposed by matter, but really does overcome them, can he realize that life is greater than matter from which it originally must have come and which it uses continually in the effort to conquer it still further. Life has evolved when it has used matter as a tool to shape matter. The implied dualism is more apparent than real, for the growing monism of science testifies to the unity not only of all life, but of all life with all matter.

The evolution of human personality has now reached a point where man is realizing the almost limitless possibilities before him in the conscious creative shaping of his environment. Matter grows more workable, more plastic, as man grows more conscious and confident. The more power he gets, the more he dares to try for.

Recent triumphs in the fields of communication and transportation, in medicine and nuclear physics, have somewhat reduced man's sense of worm-of-the-dust insignificance, so sedulously cultivated by orthodox religion and further increased by nineteenth-century behavioristic materialism. The invention of radio and the airplane and the splitting of the atom have given man more freedom of spirit and a greater sense of triumph over matter than any of his previous accomplishments. Their full effects are still to be seen, but already a new confidence is apparent.

Science is also enabling man to come closer to visualizing the universe as a whole than ever heretofore in history. Aristotle and Bacon in the *Organon* of the former and the *Novum Organum* of the latter did

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attempt to organize the knowledge of their times, yet either one of these books seems now but a small island in the sea of modern knowledge, and we know today that much of what they thought they knew was wrong. Our present-day scientists do not claim omniscience or infallibility, but they have developed better ways of checking error than were formerly known, and their field of knowledge has been enormously extended. There are thousands of skilled researchers and trained scientists today for every amateur scientist of even a century ago. Of course, there is danger of provincialism in times of specialization, but colleges are correcting that tendency by requiring general survey courses of the entire field of science.

We have also the privilege of living in the day when a great genius is working out a unified field theory which shall state in a single formula the laws governing all objects and events.

When we ask the question, "Is science discovering God and immortality?" it is to this man, Albert Einstein, that we must turn for the most significant utterances.

It is quite true that other great men of science have lately ventured into the field of theology and religion and have some of them become quite eloquent on the subject. But it is mice of the common household variety that these mountains bring forth. What they have to say is usually either a repetition of their childhood faith couched in more scientific terms, or a mere expression of pious wonder at the immensity of the universe their telescopes and spectroscopes have revealed. Several of them set forth a very muddy mod-

ernism and are guilty of the scientific sin of using certain religious terms in a sense far different from the meaning understood by the average person.

The greatest disappointment provoked by a perusal of their scientifico-theological effusions is due to the sad fact that they say absolutely nothing new or even interesting about either God or immortality and are not even aware of the existence of recent important theological books on both subjects. Yet their merely polite bows in the general direction of the pulpit have been interpreted by overeager preachers as proofs that science now accepts the Apostles' Creed and the Westminster Confession.

But Einstein, in forthright fashion and without mincing words or currying favor, comes out with a message which should make both the man of the cloth and the man of the test tube pay strict attention. For he dares to quote with approbation someone who has said that research scientists are the only deeply religious persons today.

The reason for Einstein's daring to make such a statement is apparent only when we understand his conception of religion, the only conception which affords the meeting place for science and religion which men have so long sought. It is too broad a conception, however, for any but the most advanced liberal religionists to accept. Somehow, it seems to be impossible for most preachers to understand that the desired union cannot be brought about by demanding that science become unscientific and accept the supernatural.

Einstein, in a significant article in the New York

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Times, quoted at length in the symposium edited by E. H. Cotton and entitled, *Has Science Discovered God?*, divides religion into three classes: the religions of fear, the moral religions with an anthropomorphic God, and a third and highest kind of religion appearing only in "exceptionally gifted individuals"; and Einstein calls this religion "the cosmic religious sense." It is evident that he is talking about that very cosmic consciousness we have been describing, for he points out that it does not include an anthropomorphic conception of God, was found in the great religious geniuses, and that the individual who has this cosmic religious sense endeavors to "experience the totality of existence" as a significant unity.

He takes a little quiet pleasure in calling attention to the fact that some men who have been called heretics and atheists have had this cosmic religious sense, and that it is this sense which animates the scientist in his research. It is what Dr. Albert Schweitzer, the versatile scientist, musician, and missionary, calls his "reverence for life."

If then, as Einstein claims, it is the cosmic religious sense which is behind scientific research, here at last is the meeting place of science and religion, namely, in cosmic consciousness.

Albert Einstein both preaches and lives this doctrine. He has the truly great simplicity of manner which has characterized the men of cosmic consciousness. He belongs in the coming age. In his own personality he combines the highest type of scientist with the truly religious spirit. He dares to oppose war because it is against this cosmic religious sense.

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In Chapter Seven, "The Appearance of Cosmic Consciousness," we stated that "cosmic consciousness will come about naturally without the mystic experience when we understand the mystic experience." Einstein understands the mystic experience, and he has worked out a religion which he calls "cosmic religious experience." In other words, he has attained cosmic consciousness.

His field is the field of science. By his wide, sweeping outlook over time and space, which he combines into "space-time," and his understanding of both gravitation and electromagnetism, he has reached the cosmic outlook, both intellectually and emotionally.

It is of extreme importance to note that the first great scientist to work out a unified field theory, a scientific statement of the laws of the universe expressed in one formula, should have for his own personal religion nothing more or less than cosmic consciousness.

He is not a religious mystic; he has had no theophany; he is not even a theist. He has no use for the old-fashioned ideas of immortality, for the cosmic religious sense is itself immortality enough.

Is science discovering God and immortality? It is discovering cosmic consciousness, and that is what the mystics were talking about when they used the words, God and immortality. Einstein would not use either word in stating his religion, but his own religious testimony shows that he believes in the possibility of attaining, and has himself attained, that creative cosmic consciousness which is the very essence of religion.

CHAPTER TEN

GOD AND COSMIC CONSCIOUSNESS

IS THE COSMIC ENERGY PERSONAL?

THE WORD, GOD, is one of the vaguest words in the English language. It has been used to designate such widely varying ideas as, at the one extreme, the anthropomorphic Yahweh of the primitive Hebrew religion who chose the cool part of the day to walk in the garden, and, at the other, mere force itself. It is obvious that the former concept cannot be held by any modern thinker and that the latter idea does not merit the name, God. There are, it is true, many who talk glibly today of an impersonal god, unaware that their adjective contradicts their noun.

An impersonal god cannot be a God at all, for the idea of God is robbed of all meaning if God is not good, and goodness exists only in persons. Goodness consists in choosing the right when one could choose the wrong, and only persons can choose; indeed, only persons know right from wrong.

There are also appearing today among the mod-

ernists those who speak of a non-supernatural god, or who deny belief in the supernatural while affirming belief in God. It will be necessary for such persons to redefine their terms, and to rewrite the dictionaries, for if God is not a supernatural being, the word, God, has been deprived of its commonly accepted content. In other words, to remove the supernatural content from the concept of God is to abandon the god of Moses, Jesus, and Muhammad, to say nothing of the god of Paul, the Church Fathers, the popes, and all the leaders of the Protestant Reformation.

Dr. W. N. Clarke, in *The Christian Doctrine of God*, declares that "the supernatural is God himself."

But belief in the supernatural is growing more and more difficult as science gradually undermines the pillars which once were supposed to be the main supports of the Christian faith. The belief in the miracles of the Bible retreated from the Apocrypha to the Testaments, then from the Old Testament to the New. Then certain miracles in the New Testament, like the coin in the fish's mouth, began to be questioned or given naturalistic interpretations. Finally even the virgin birth and the bodily resurrection of Jesus were omitted from the required beliefs for candidates for ordination to the Christian ministry in some denominations. The retreat of the supernatural before the advance of science is making it necessary for the modernist to give up the supernatural and radically redefine the word, God. Those who cling to belief in a supernatural god must expect to find theology soon classified along with alchemy and astrology.

The so-called supernatural is to the scientist only

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the not-yet-understood natural, and the area, once so large, of the not-yet-understood has rapidly diminished of late. When thunder and lightning were not understood, they were deemed supernatural and were worshiped. But now, the electricity of which they were the evidence is used to light the church edifices where thunder can no longer be called the voice of God.

The question of the existence of God, then, resolves itself into another form: Is the cosmic energy personal?

Everyone knows that cosmic energy exists. It is perfectly apparent that there is some force behind or in the drive of evolution. We can read the record in the rocks, or in the human embryo, of the long struggle upward from lowly, simple, unicellular forms to higher, complex, multicellular ones, and we can trace the growing nervous system by which the evolving forms grew more sensitive to their environment until brains appeared and grew more complex in pattern up to man.

Is this cosmic energy conscious? Was there a god directing all this? Once, and not so long ago, men proved to their own satisfaction that man in his present form was created full-grown out of the dust of the earth. When that belief fell before the advance of science, and evolution came to be generally accepted, God was retained and his existence proved by several arguments. But the idea of God was constantly growing dimmer and more vague. When God was a real person up in heaven, He was easy to visualize. But

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when astronomy disposed of heaven (*heofon*, the heaved-up place) and it was remembered that, after all, according to the Bible, God is a spirit, then those who sought to worship Him, in spirit and in truth, found it harder to visualize Him. One honest deacon, when asked to describe his idea of God, said that all he could think of was "an oblong blur."

The difficulty of imagining a person without a body was indeed great, and most persons who believe in God and who are acquainted with the findings of science have to content themselves with calling God the force for good in the world, the power making for righteousness, or even "the principle of concretion." By that time the historical God has disappeared.

But if there be such a thing as cosmic energy, and its existence must certainly be admitted, otherwise evolution is a mere name, then that energy is certainly conscious in one of its manifestations at least, namely, in man. And it is increasingly conscious as man evolves, until in the cosmically conscious man the universe is conscious of itself at last.

Is the cosmic energy personal? Is it conscious? The answer is: Yes, it is conscious and personal in us. Of that much we are sure. The most we can assuredly say of that part of the cosmic energy which manifests itself in lower forms than man in the evolutionary chain is that it is potentially conscious there. Wherever there is life, there is at least an embryonic form of mind. And since life evolved from matter, the universe is a universe, and even matter held within it the promise of conscious life. Man, then, as the self-

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conscious part of the universe with the possibility of becoming cosmically conscious, has tremendous responsibility. With the power to think has come the responsibility of creatively directing evolution henceforth.

CHAPTER ELEVEN

THE ADVOLUTION OF MAN

ADVANCING TOWARD COSMIC CONSCIOUSNESS

A WORD is coming into use to describe this conscious self-directed evolution of man—the word, advolution. Evolution etymologically means wheeling out of, and advolution, wheeling toward. The latter is more purposive. Evolution describes the progress of life up to the time of man; advolution, from now forward. In a sense, advolution began even before man, for, as Robert Briffault says, “Man has not ‘appeared,’ he has grown.” Man has made himself, from feet and hands to brain.

But in a fuller sense of the word, the advolution of man is just beginning, for he is only now becoming conscious of his possibilities. His evolution up to now has been only vaguely purposive. He did what had to be done at the moment. He planned for only very brief periods. Five-year plans are rather new, but already seem short-range.

If man is to advolve toward a higher type of consciousness, he cannot do it alone. Much of his evolu-

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tion has been individual hitherto. He has had societal influences, to be sure, but they have been forced upon him. There are many who are bemoaning the disappearance of the last frontier. The pioneer spirit is still strong in man, but, while it has its value, it can easily appear as a liability when the social fabric becomes closer woven.

Hereafter, however, man must learn to play the game with more team spirit. Social responsibility is the lesson he must learn. The era of personal liberty had its attractions, and the subordination of personal liberty to social progress is difficult but increasingly necessary. Always there must be saved a considerable area where individual self-expression will be allowed free play, otherwise we shall become so standardized as to lose initiative, and therefore attractiveness and usefulness; for the state, too, will retrogress when the individual loses too much of his freedom and when his initiative therefore atrophies. Inventiveness must be saved. If originality disappears, then evolution and ad-volution will both cease. Variation has been the key to progress. The task now will be how to save enough of it without overstimulating it.

The great problem of the advolution of mankind which now lies before us, clamoring to be solved, needs a long look ahead. There must be hundred-year plans in all fields of human activity. And that is where the conscious transition from self-centeredness to cosmic-centeredness will be of great assistance, even before we reach cosmic consciousness. When we definitely resolve to advolve from self-consciousness, we shall immediately be so much nearer the latter state,

for our attention will be fixed on the larger unit and our minds will naturally broaden. We shall plan with the race in view, and we shall therefore almost automatically drop our selfishnesses and "the last little beastliness in our blood."

The Institute of Human Relations at Yale University is a step in the right path, but it needs to be supplemented by institutes in human advolution in connection with all our universities. There are enough men sufficiently familiar with the proper technique of social advance to fill chairs in that subject in every large college.

We could begin by training a large group of young men and women in sociopolitical engineering. Their education should include more than training in the technical side of social and political reform. They must first become inspired with a vision of the possibilities lying before advolving humanity. They should be made familiar enough with the process of evolution in the past to feel the surge and upthrust of power behind us, that they may gain thereby enough faith in the power of the life-force itself to believe that social progress is possible. There are too many sad young men as it is, due to our faulty education.

Then, since they are to be the leaders in shaping a new social and political order, they would do well to study the experiments in social grouping and political forms which man has made in the past, especially the recent past.

Such a leader as we contemplate would need to acquire a pretty complete knowledge of the principles of eugenics, including the values and dangers of con-

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traception, sterilization, and other methods of regulating the number and the quality of births. He would also have to study the effect of various types of education upon various forms of government and vice versa. Too long have politician and educator sneered at each other.

In short, the leader's knowledge of the means of social and government control and the factors conducive to societal evolution would need to be based upon accurate statistics and careful observation by himself and others.

Supplementing and cooperating with these sociopolitical engineers, there should be a somewhat similarly trained group of economic engineers. Some of their courses of study and training would coincide, each with the other. But the second group would be primarily concerned with the laws of production and distribution, the effects of various occupations upon employees or workers under various forms of government, and the cultural effect upon the general trend of human development. Their minds should be so trained that they will look at everything in the light of racial trends and values and with a view to the development of a better economic distribution of the results of work or production of any sort.

A third group of especially gifted young men (of course there would be young women in all these groups, equally advantaged: we are simply using the generic term) would be trained to look after the proper development of cultural values in the new era. There is not at present a single cultural agency in

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America that is fifteen percent efficient, and that goes for the world.

Schools, colleges, and universities; libraries private and public; bookstores and publishing houses; magazines, newspapers, and tabloids; churches and other religious institutions; theatres and moving-picture houses; concert halls, music stores, and other music establishments; museums, exhibitions, and historical sites and relics; radio and television—are there any of these nine cultural agencies that are developed to a point anywhere near approaching their possible good influence in improving human personality? In any one of these named fields, there is enough reconstruction and re-aiming to be done to take a half dozen lifetimes.

The correlation of these cultural agencies to avoid duplication and omission—there is a challenge that has not yet been heard, so far as we have observed, yet it is a need and an opportunity which surpasses any other. What a profession to be developed there! There might well be a correlator of cultural agencies in every city.

We have lately learned to correlate charitable organizations to take care of the wrecks due to lack of social, economic, and cultural planning, and some bright day we shall begin at the other end of the problem. There should be frequent, regular meetings for consultation and long-range planning held in every city, with a view to the improvement of cultural standards in that city. There are some cities where the high-school principals, librarians, book dealers, museum directors, theatre and moving-picture house owners,

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directors and promoters of music, clergymen, editors, and radio officials have never held a single meeting together to make plans for what should be their chief mutual interest, the culture of the community.

When we learn to take a long look and a wide look at culture in all its aspects in order to be able to determine what is needed in a given community at a particular time, we may then be able to raise the cultural level of certain parts of our country where a culture-graph would show a deep valley.

There are graphs to show the rise and fall of stocks, of the sale of automobiles, of the devastations of insects, of the prevalence of tuberculosis and hookworm, but who has ever seen an adequate culture-graph and where is there yet assembled the information from which one might be made?

We inform our children occasionally and half-heartedly that culture is desirable, and then send them forth into a community where the heads of the cultural agencies do not even know each other. Our schools are only beginning to find a second-rate place on their weekly programs for half-trained teachers of art and music who struggle valiantly but to little purpose against a heart-breaking apathy or open opposition. How can we expect our children to learn appreciation of culture when their favorite reading is a comic strip which has for its chief humor the ridicule of every form of culture by a man whose chief delight in life is corned beef and cabbage?

If we are to advance, we must learn what culture consists of; we must make room for it in our schools, even if we have to exclude some less important mat-

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ters; we must give all forms of cultural education a chance, even if we play bridge only every other day; we must correlate the community cultural agencies; and we must train a few cultural engineers or directors of cultural development.

We have included the churches in the list of cultural agencies, and that is one of their functions, improperly conceived and poorly carried out because the theological seminaries are too busy teaching hermeneutics, homiletics, propædeutics, and the documentary analysis of the Hexateuch to pay any serious attention to teaching such a thing as how to direct the cultural growth of the community. If the young preachers were given a thorough course of that sort, both the churches and the communities to which those young men went to work would experience such a "Great Awakening" as to make Jonathan Edwards' ghost envious.

But the church and religion and preachers have another office to perform. We need to have developed among us a new type of religion, or at least the reorganization of the old type, with the idea of deliberately harnessing the undoubted power of religion to the task of improving human personality and lifting men toward the plane of cosmic consciousness. Some churches and ministers will favor the plan of doing it by improving the individual; others will insist on the importance of the social emphasis. The third and wiser group will want to work both approaches at once. By whatever way, it certainly needs to be done, consciously, deliberately, and with a long-range vision.

Human personality is the most important thing

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on earth, and its improvement is peculiarly the task of religion. The Christian religion has the advantage of having for its inspiration the greatest personality of which we have any record, a personality developed to the point of cosmic consciousness. His attainment of cosmic consciousness "brought life and immortality to light." The word in the Vulgate version is *illuminavit*. His personality marks the furthest advance of evolving mankind, "the growing tip of the race-life," and to be immortal means to millions to be like him.

Why not utilize that tremendous dynamic to rouse and make enthusiastic for personal and racial improvement the youth of our land and the world? It cannot be done by requiring them to subscribe to the theological deposit of ancient centuries of hair-splitting debate. It can only be done when preachers and parents and cultural leaders themselves catch the inspiration of that life, not through mystic trance, but by intellectual, intuitional, and emotional appreciation of what creative cosmic consciousness did mean in him, and can mean in us.

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